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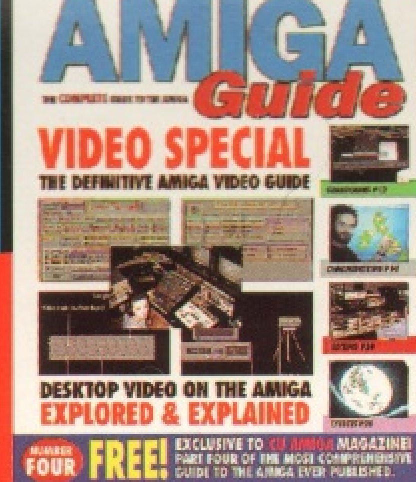
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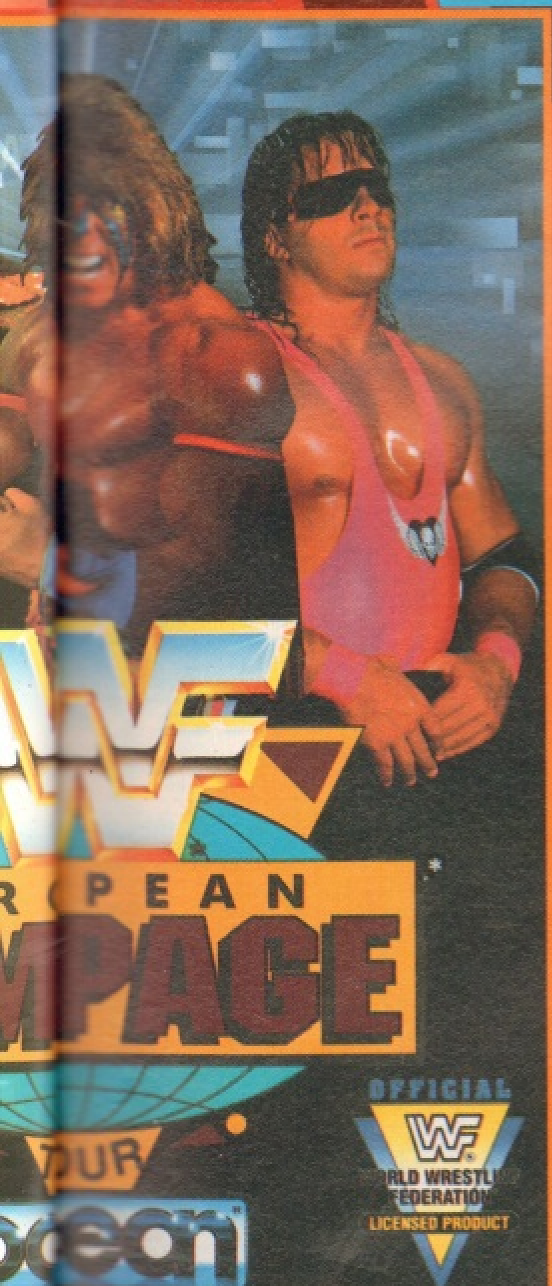
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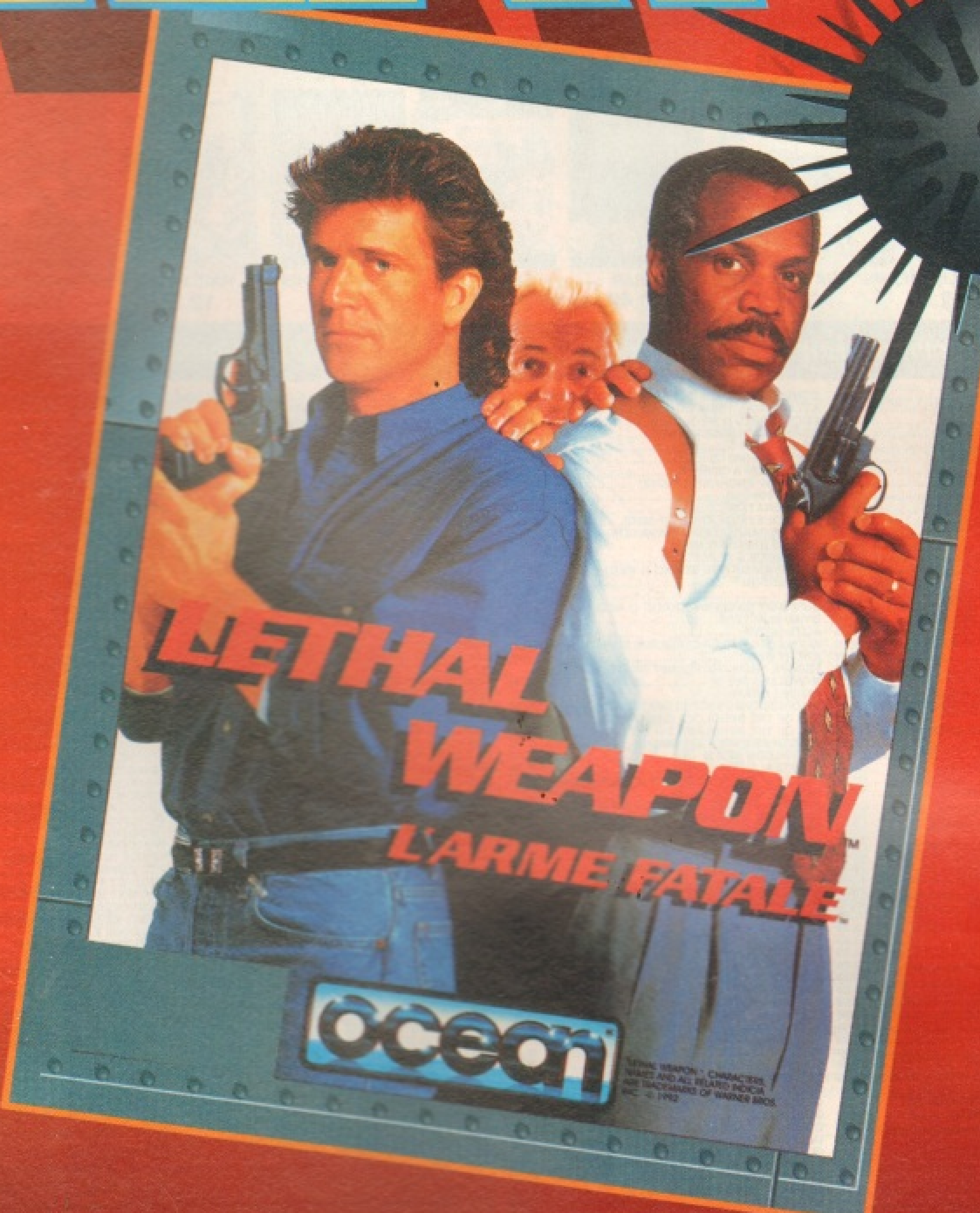
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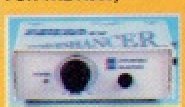
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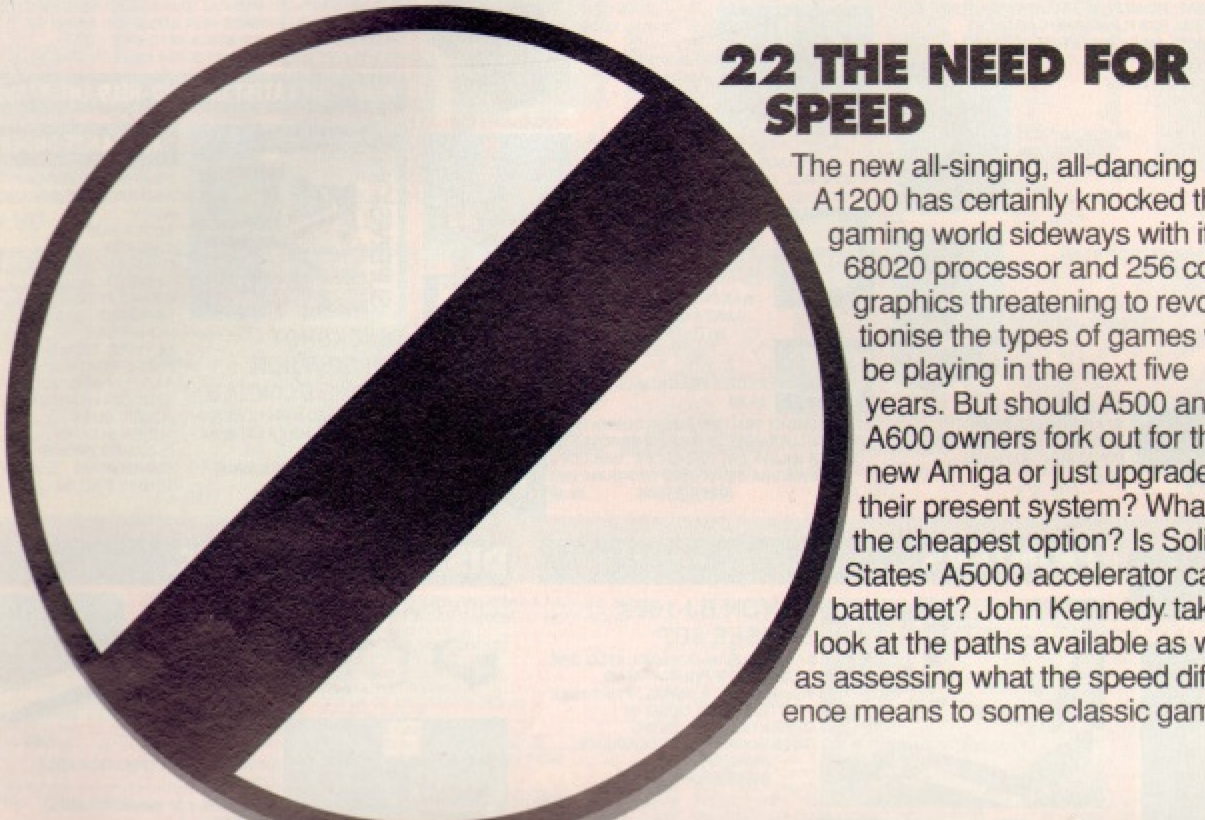


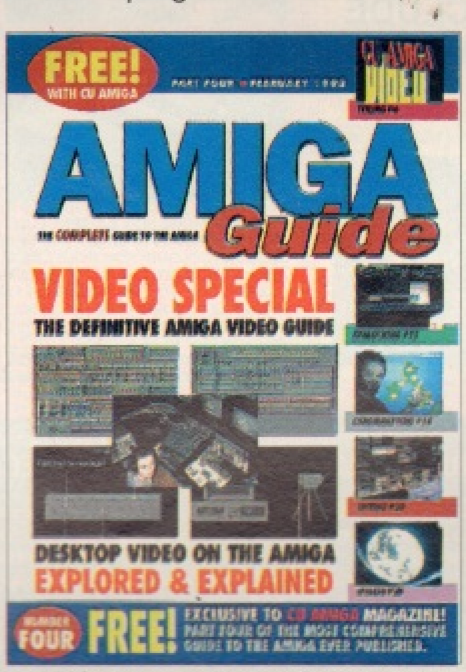
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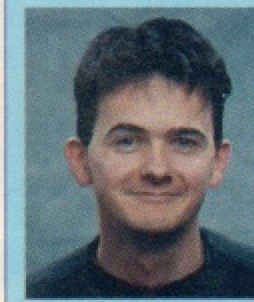
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E D I T O R I A L


Dan Slingsby – Editor

It's certainly an exciting time for Amiga owners at the moment. Commodore are pouring money into research and development like never before and both the A1200 and A4000 are selling in record numbers. To top it all, rumours have started to circulate about an entirely new generation of machines (yet again!), including new high-end models and a revolutionary new CDTV console that could incorporate some of the technology currently being developed for Electronic Arts' new console. As always, we'll keep you posted on the latest developments as and when they happen.

As 1993 gets well underway, there certainly seems to be no let up in the number of software and hardware releases for the Amiga. In fact, there's been a mushrooming of products in recent months and it's been difficult to cram everything in. But cram it in we have, as you can probably see from this issue. For starters, we've got a huge 32-page video special tucked away between pages 130 and 131 that tells you all you need to know to transform your dreary old home videos into super-slick action-packed epics. Then there's our head-to-head lead feature which pits the A1200 against Solid States' A5000 accelerator card to see which gives the best injection of speed to a whole range of classic games. There's also the first installment of a year-long DPaint tutorial, a three-page review of Microdeal's 16 bit sampler, Clarity, an exclusive preview of gold Disk's *ProPage 4.0* and a feature on the future of PCMCIA cards.

On the game's front, there are reviews of the Bitmaps' *The Chaos Engine*, Cyberdreams' debut sci-fi adventure game, *Darkseed*, and Domark's excellent *AV8B Harrier Attack* flight sim, one of the first to really take advantage of the A1200 faster processor. Phew, I sometimes wonder how we cram it all in. Enjoy it all the same and see you next month.

REGULARS

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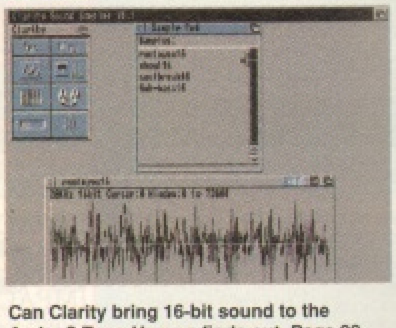
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GET SERIOUS

VITY REVIEW **PRODUCTIVITY REVIEWS**.PRODUCT

The best just got better, as we take an exclusive look at Gold Disk's latest version of ProPage and Tony Horgan puts Microdeal's 16-bit sampler, Clarity, to the test. Also reviewed are a hard drive for the CDTV, the latest incarnation of Saxon Publisher and Epson's new GT6500 flatbed scanner.



Can Clarity bring 16-bit sound to the Amiga? Tony Horgan finds out. Page 98.

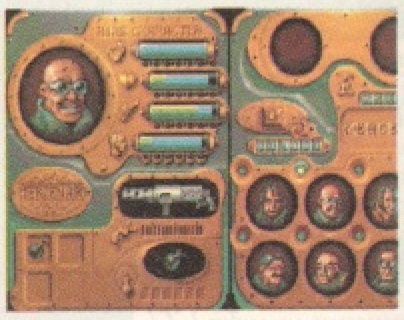


The Epson GT6500 flatbed scanner is put to the test on page 104.

SCREEN SCENE

GAME REVIEWS **GAME REVIEWS** GAME REVIEWS

Core Design's neanderthal hero, Chuck Rock, returns in another platform romp and we've got an exclusive look, plus work in progresses on Team 17's Superfrog and Thalion's sequel to Amberstar. On the reviews front we've crammed in a whole host of top games, including the Bitmaps' The Chaos Engine, Harrier Assault from Domark, Grandslam's Nick Faldo golfing game and Blue Byte's History Line strategy war game.



The Bitmaps' latest shoot 'em up, The Chaos Engine, gets us all steamed up. Page 47



Chuck's back in Chuck Rock 2. Read our exclusive work in progress on page 34.

COVERDISKS

Our December coverdisks are absolutely packed with programs and games. We've got an exclusive graphic manipulation package, the latest virus checker, and more games than Hamleys.



DISK 50

Enter the world of Desktop Video with this months sensational coverdisk software. On Disk 50 you will find not only an excellent titling package but also a scripted presentation system which will allow you to create titles and display them with a varity of different wipes and effects.
You don't even need a genlock to take advantage of the features of these two packages. You can use them to create title pages and end credits for virtually any video production.
Using the presentation sequencing software you could even build up a completely computer generated film from stills and animations.
Excellent Polyfont technology means that *anyone* can create superb, accurately positioned, correctly scaled titles and captions in seconds. Turn to page 12 now for full intructions.

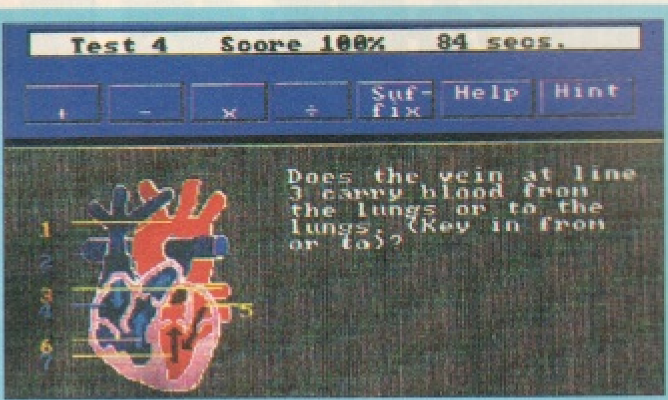
DISK 51

This month, our games disk has a two-player demo of Team 17's excellent new beat 'em up, Body Blows. As you'll be able to see, it's a hell of a lot faster than US Gold's Street fighter 2 conversion, and looks certain to carry off the beat 'em up crown when it's released in a couple of month's time. Our championship matchis between Dan and Nik, a pair of kung-fu fanatics who also have a number of special movesand kicks up their sleeves. If that isn't enough, we've also squeezed on a playable hole from grandslam's upcoming nick Faldo golf license – this one has been especially prepared for CU, so you won't find it elsewhere. There's also a special 90s version of aging VCS classic, Combat, on the disk plus one of the first video games, Pong, which we've put on just for a laugh (and it was only 6k after all!).

AMAZING CU AMIGA VIDEO OFFER

For the paltry sum of just £2.95 (to cover post and packing), a completely spiffing 55 minute Amiga video can be yours. That's right. We've teamed up with a leading video company to offer a sensational deal on a fantastic new video that covers the entire spectrum of Amiga computing. If you're new to the Amiga, or even if you're an old hand, then this really is an essential purchase. Professionally shot and edited, the CU Amiga video offers hints and tips on getting the most out of DPaint, takes a look at Morph Plus and Image Master in action, presents a feature on Desk Top Publishing and takes an in depth look at Video production tgechniques using the Amiga. There's a lot more included in the video – buy it and see. Turn to page 24 of our supplement for further details!

MICRO SCIENCE



For those readers busy preparing for their GCSEs this spring, help is now at hand. LCL have a comprehensive range of Amiga programs aimed at helping students with their revision and self-tuition. *Micro Science*, their latest release, covers the new Integrated Science course that's now compulsory in all schools. The collection of programs follows the National Curriculum in Science very closely and can also be used for Physics, Chemistry and Biology GCSE revision. Including practical experiments, a graphics adventure and some three dimensional pictures of the insides of the human body – some of which are even animated – the programs are suitable for older primary school children, GCSE students and adults who want to brush up on the subject. You can even watch a person eating and digesting food – not something I'd recommend first thing in the morning! *Micro Science* retails for £24 and will be available shortly. For further information, contact LCL on 0491 579345.

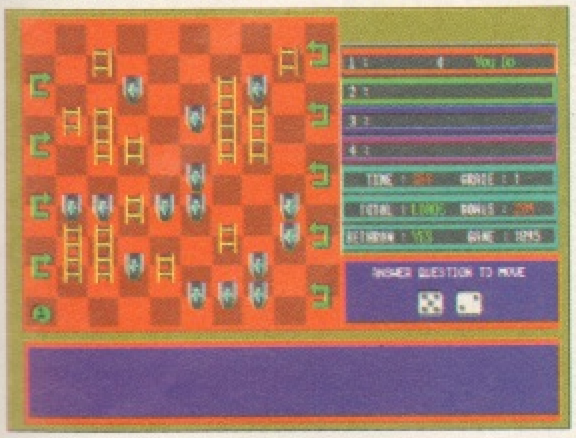
WONDER DOG

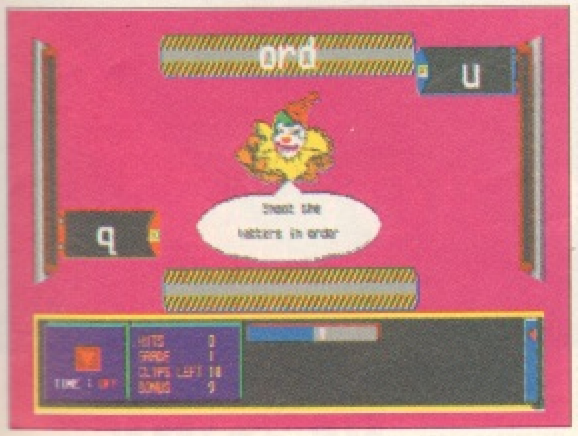




One of the best games to appear on Sega's Mega-CD is *Wonder Dog*, a multi-stage platformer designed and coded by Derby-based Core Design. By all accounts, it's a fast-paced game with absolutely tons of bonus levels, excellent animation and some incredibly cute looking graphics. And the good news is the game is also set to make it onto the Amiga! *Wonder Dog* was originally conceived to be a *Sonic*-beater and be to the Mega-CD what Mario is to Nintendo, so it looks like we're going to be in for a treat. The scenario is typical cutesy fair, as a dog has come to Earth looking for the long lost tribe of its 'Masters' and by donning a special suit from his Dog-inhabited world he can be magically transformed into *Wonder Dog*, the canine superhero. Sheesh! Only preliminary work has been done so far, and nothing has yet been committed to disk, so it's unlikely the game will be released before the second half of the year. As always, we'll have an exclusive work in progress as soon as possible.

For more information telephone Core Design on 0332 297797.





TEN OUT OF TEN

Aiming to emulate the success of Europress' *Fun School* series, Triple R Education are set to release a series of eductional programs over the course of the next year. The first of these, *English* and *Maths (Numbers)*, have just been released for £25.95 each. Both are designed to fit in with the GCSE National Curriculum and have special built-in achievement records that record a user's progress and eventually award a certificate when the course is complete. Both programs are presented as a series of six games, so students can have fun while also absorbing essential facts and figures. Many of the programs' features can be individually customised by a teacher or parent to help get the maximum benefit from each program. We'll have full reviews next issue, but if you'd like further information please 'phone Triple R Education on 0742 780370. The company operate a try-before-you-buy policy so that people can use the program at home over a special trial period before making thier minds up whether to keep the program or not.

***Left:* Here's a couple of screens from the English program, proving that educational programs don't have to look dull at least.**

DINO DINI AND KICK OFF 3

For those of you eagerly awaiting the release of *Kick Off 3*, you're in for a long wait. The programming brains behind the previous two *Kick Off* soccer sims, Dino Dini, has left Anco, the publishers of *Kick Off*, and signed an exclusive deal with Virgin Games. The good news, though, is that all the code that was originally written for *Kick Off 3* will now find a new home in the form of *Goal!*. Virgin are looking to release the game in the Spring and we'll have a full review as soon as possible. Meanwhile, Anco still have exclusive rights to the *Kick Off* name and may go ahead with a third incarnation of the game, but this will not include any of Dino's code. For more info, ring Virgin on 081 960 2255.



A1200 GETS EXTRA 32-BIT RAM

If you want to speed up your A1200, and upgrade your RAM at the same time, you could find just what you're after in this new expansion board from Micro-PACE. The imaginatively-named MBX 1200 is a combination of a 32-bit memory board and a Motorola 68881/68882 floating point maths co-processor. Fast RAM can be installed as either a single one, two, four or eight megabyte 32-bit SIMM unit. Micro-PACE claim that it can increase the speed of floating point operations by up to 55 times, and boost the general running speed of the machine by over 75%. Depending on the configuration, the MBX 1200 retails from £145.95 to £389.90 including VAT. For more information Micro-PACE UK can be contacted on 0753 551888.



EXPRESS YOURSELF

A new structured drawing package has just been released by Micro-PACE. *Art Expression* is designed for use in DTP applications, and allows you to construct scalable artwork from scratch, or convert bitmapped graphics to structured images. Editing tools include: add, delete, move, join, split, and align points. There are also tools for closing paths, creating text objects, and changing file magnifications. Among the available special effects are warping, morphing and blending. Files can be loaded and converted from *Professional Draw*, *Aegis Draw*, *Pro Vector* and *Adobe Illustrator*. It also loads and saves standard Encapsulated Postscript files, as well as IFF DR2D files, for compatibility with *Pagestream* and other DTP software. *Art Expression* retails for £145.99 including VAT, and is available from Micro-PACE on 0753 551 888.

STREET FIGHTER 2

In the last issue of CU Amiga, we incorrectly stated that the Amiga versions of *Street Fighter 2* would run on the A1200. This isn't the case, although an A1200 specific version will be released later on in the year. We're very sorry for this inaccuracy, although we were actually informed by US Gold that it was A1200 compatible. Slap wrists all round, then, I think.



ALL FORMATS COMPUTER FAIRS

The ever-popular All Formats Fairs are as good a place as any to look for that money saving piece of kit at knock down prices. There is always a gargantuan amount of Amiga-related hardware and software for sale and the fairs are held all around the country, so getting to one should not prove a problem. The calendar for the next couple of months is made up of the following dates:

FEBRUARY

6th London – Novotel, Hammersmith
7th Wales – University Union, Park Place, Cardiff
13th London – Sandown Park, Esher, Surrey
14th West Midlands – National Motorcycle Museum
20th North West – Haydock Park Racecourse
21st Scotland – City Hall, Candleriggs, Glasgow
27th Hemel H/stead – Dacorum Pavilion, The Marlowes
28th West – Brunel Centre, Templemeads, Bristol

MARCH

6th Leicester – De Montfort Hall, Granville Road
7th North – University Sports Centre, Calverley Street, Leeds
20th London – Sandown Park, Esher, Surrey
21st West Midlands – National Motorcycle Museum
27th North West – Haydock Park Racecourse

Ring 0608 662212 for more information.

SEIKOSHA SL-95

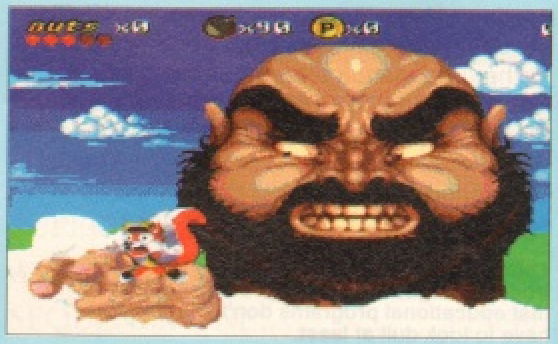
The printer wars continue, as Seikosha announce the release of yet another new model. According to Seikosha, the SL-95 is the first 24-pin colour printer to retail for less than £250. Print speeds are quoted as 240cps in super draft mode, 192cps in draft, and 64cps for letter quality output. Emulating the Epson LQ860 and LQ850 printers, it uses a standard parallel interface. It also has a 43K buffer and features nine fonts. Seikosha can be contacted on 0753 685873.



OCEAN FRANCE BACK ON THE AMIGA

You might remember Ocean France as the creative powerhouse behind such marvellous coin-op conversions as *Pang*, *Toki* and the never released *Snow Brothers*. Well, after a rather long hiatus, during which time they've been concentrating on console work, the Gallic softcos have just announced that they're currently working on a new Amiga game – and this time it's not a coin-op clone, either. *Mr Nutz* is a platform-style romp (blimey, what a surprise!!) in which the player has to guide the game's cute'n'cuddly squirrel over a variety of testing levels to free his kidnapped girly (well, the last bits just a guess, but it's still got a 90% chance of being right, after all). There's nothing much to see yet, except for some mock up screens, but even at this early stage things are looking highly promising. Expect *Mr Nutz* to be one of Ocean's big releases next Christmas. Ocean can be contacted on 061 832 6633.





AMIGA CHARTS

With sales of 75,000 units up until December 31st 1992, US Gold's Street Fighter 2 certainly set the Amiga charts alight over the Christmas period and easily outsold its nearest rival by almost three to one. Wow.

Here's the most up-to-date charts we've got for the period ending January 8th, 1993.

TOP TWENTY FULL PRICE

1. Street Fighter 2 (US Gold)
2. Zool (Gremlin)
3. Sensible Soccer 92/93 (Renegade)
4. Wing Commander (Mindscape)
5. Indiana Jones – Fate of Atlantis (US Gold)
6. Premier Manager (Gremlin)
7. Putty (System 3)
8. WWF2 – European Rampage (Ocean)
9. Campaign (Empire)
10. Pool (Virgin)
11. Av8B Assault Harrier
12. Formula One Grand Prix (Microprose)
13. Lemming Double Pack (Psygnosis)
14. Pinball Fantasies (21st Century)
15. Dream Team (Ocean)
16. Dalek Attack (Admiral)
17. Secret of Monkey Island 2
18. Assassin (Team 17)
19. Nigel mansell World Championship (Gremlin)
20. Road Rash (Electronic Arts)

AMIGA BUDGET

1. Alien Breed Special Edition '92
2. Trivial Pursuit
3. Panza Kick Boxing
4. Dizzy: Prince of the Yolk Folk
5. Street Fighter
6. Magic Land Dizzy
7. Spellbound Dizzy
8. Supercars 2
9. Lotus
10. Prince of Persia

Thanks to Microbyte for the use of their charts.

7th INTERNATIONAL COMPUTER SHOW

From the 19th to the 21st of February, Hall 1 of the Wembley Conference Centre will be home to the 7th International Computer Show. Over 150 exhibitors from the UK, Europe and the USA will be attending. The show will be divided into five main sections: entertainment, the 'home office', education, music, and the Acorn village. A range of help desks and free game areas will, no doubt, draw the crowds. Also, a number of 'head to head' challenges will be organised, giving the public a chance to take on the experts at their own games. Advice on the serious side will cover various subjects, such as how to use your home computer to teach the kids, how to set up a home office, and interactive demonstrations of the latest music software. The organisers predict a turn out of over 35,000 visitors.

Tickets on the door are priced at £6, while advance tickets can be ordered from the ticket hotline (0726 68020) for £5. Students, OAPs, unemployed and children over 10 have a reduced rate of £4 on the door, or £3 in advance. For further information contact Westminster Exhibitions on 081 549 3444.

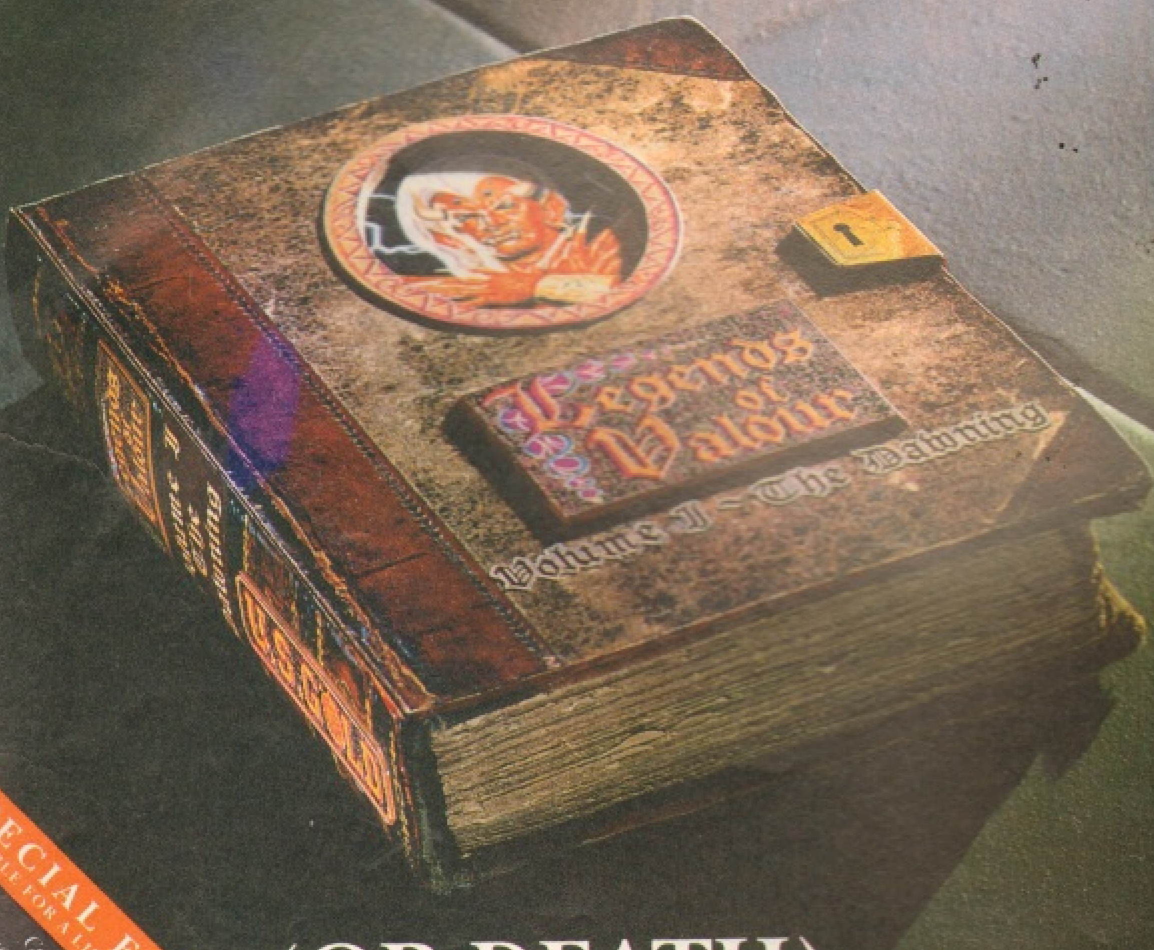
THINK OF IT AS A WAY OF LIFE

JOURNALISTS see new titles every week, each one claiming to be the best of it's kind, to date. Yet at the recent European Computer Trade Show it was the journalists themselves that could be found singing the praises of one new title in particular - LEGENDS OF VALOUR.

KEVIN BULMER (The Designer of Corporation) and IAN DOWNEND the creators of LEGENDS OF VALOUR, were literally jostled off their feet as writers, retailers and fellow programmers sought to experience what one prominent industry figure called "A game that's more a way of life - utterly extraordinary."

Demo disks can only scratch the surface, screenshots in magazines could never do the astounding graphics justice (that's why you'll see none here). The only way to really find out what all the fuss is about is to experience it for yourself. LEGENDS OF VALOUR - The Dawning will be available on Amiga, ST and PC very soon.

Ask your retailer for more details or send a S.A.E. to Danielle Woodyatt at the address below for an information pack.



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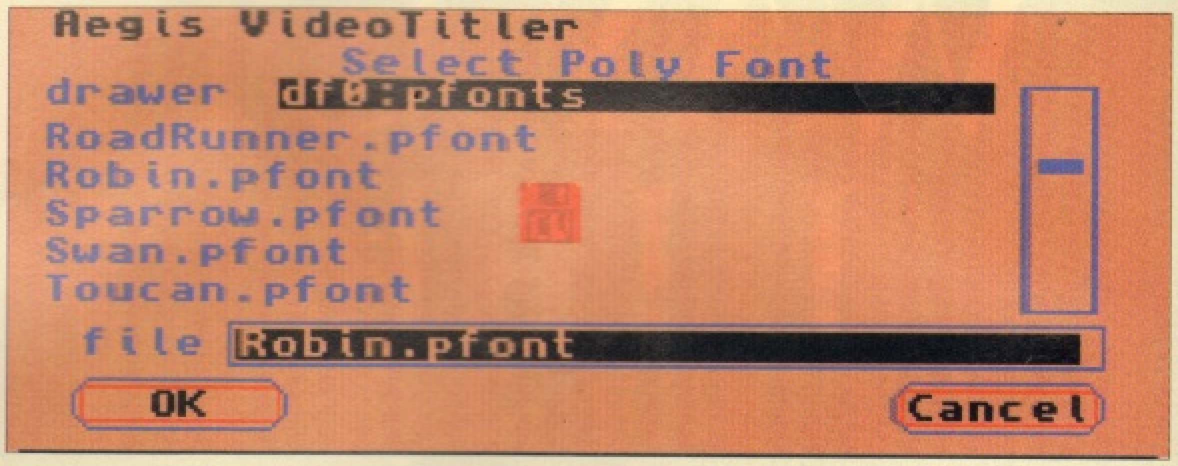
COVERDISKS



Select ENTRY from the text menu, drag the text cursor into the middle of the screen, and type what ever comes into your head.
Hopefully, it will be slightly more relevant to your home video than the text above. However, whatever you decide to use you can manipulate how it looks with ease when using the polyfont option.

VIDEOTITLER

This month we've crammed a whole two-disk commercial video titling and animation package onto Coverdisk 50. Your home and corporate videos will never look the same again, once you've used the stunning Videotitler. Backing up Videotitler is the superb video/presentation system Lights Camera Action.



Select POLYFONTS from the text menu, then choose one from the directory listing.



LOADING COVERDISK 50

To get all of this onto one disk, the data has been compressed. Before you can use it, you need to decompress it onto two spare disks. The disks don't have to be formatted, but make sure they are write enabled (so the tab is over the hole), and that the coverdisk is write protected (so you can see through the hole). Put the coverdisk into the internal drive, and reset the machine. Once the Workbench screen comes up, double click the 'CU 50' disk icon, then on the 'VT-DISK 1' icon. Replace the coverdisk with your first blank disk when it asks you. Swap the disks once again at the prompt. Then double-click the 'VT-DISK 2' icon. This time, insert your second blank at the prompt. The second disk decompresses into two stages. Just follow the on-screen prompts and you'll end up with two new disks. Insert the first of your new disks, and reset the machine.

GETTING STARTED

You should now have expanded Coverdisk 50 onto two disks. If not, read the section on loading the disk. Done that? Okay, now you should have a Workbench screen, with an icon labelled VIDEOTITLER somewhere on it. Double click it, and the disk window will open up to show two more icons – double click the one marked VIDEOTITLER.

Now we've got the program loaded, click on the mouse to get rid of the copyright notice. Don't panic, that black screen is all you're supposed to see for now, apart from the mouse pointer. The whole program is menu driven. Follow these steps to get some text up on the screen.

1. Select POLYFONTS from the text menu.
2. Load any font from the requester box by double clicking on its name.
3. Move up to the TEXT menu once more, and select ENTRY (the one under POLYFONT, not the one above it).
4. A cursor will appear somewhere on the screen. Drag it into the centre by clicking it with the left button (keeping it held down) and moving the mouse.
5. Think of something witty or clever, and type it in. Alternatively, type 'hello'. Press RETURN, and the text will become encased in a box.
6. Click the mouse on any of the eight dots around the edge of the box, and move the mouse (still keeping the left button depressed).
7. Release the mouse button, and the text will be either re-sized, warped or moved, depending on which point you dragged. Experiment with the remaining points to find out what each one does.

FANCY TEXT

Had enough of that then? Let's try adding a bit of zap to the text. Select NEW from the project menu, and then click on the box marked NEW. Go to the text menu and select STYLE. From the box that appears, click on any style except plain, and close the window by clicking the gadget in the top left corner. Back on the text menu again, select ENTRY (the lower of the two), and have another go at typing something witty.

This time the text should be a bit more eye-catching, and you can size, stretch and spin it just as before. To add even more visual excitement, try loading one of the IFF picture files from the second disk. Select OPEN -> PICTURE from the project menu, and wait for the drive light to go out. Replace the first disk with the second, click in the top box containing 'DF0:', and press RETURN. Click on the PICS directory, then on any picture file that takes your fancy. Click the OK box to load it.

You can use this as a background to any text you want to display. The picture will stay intact while you mess around with your text over the top.

ANIMATION

If you really want to spruce up your videos, a bit of animation wouldn't go amiss. Turning your existing titles into animations is easily done.

First of all, you need to get it into recording mode. To do this, format a disk, and then load up a nice big font. Put a title in the middle of the screen, and select OPEN ANIMATION from the project menu. A file requester will appear. Put your blank disk in the internal drive, delete anything that's in the top box, and replace it with 'DF0:'. Press return and you'll get the empty directory of your blank disk. In the bottom box marked FILE, type in a filename for your forthcoming animation, then click the OK box.

Back on the main screen, you can get on with



Warp the text by simply dragging the points on its surrounding box. Weird and wonderful effects can be achieved.



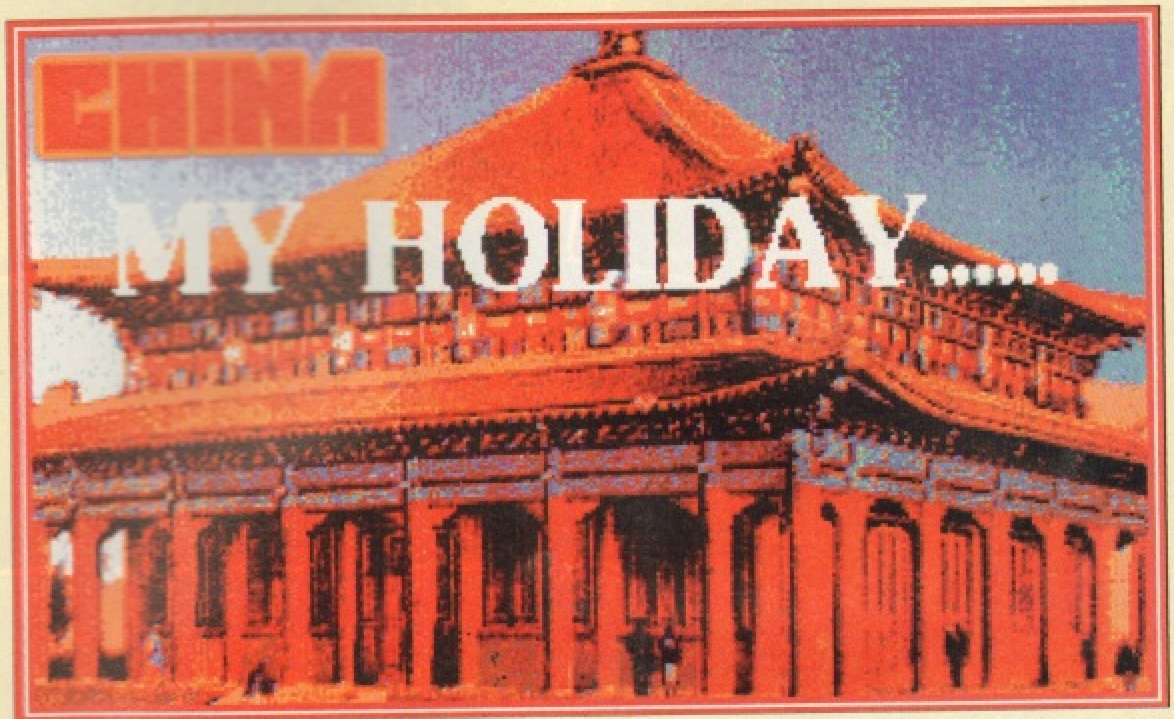
Choose some fancy text effect by selecting STYLE from the text menu. Click on whatever style takes your fancy.



Standard IFF picture files can be loaded in as backgrounds to give the whole thing a more polished, professional look.

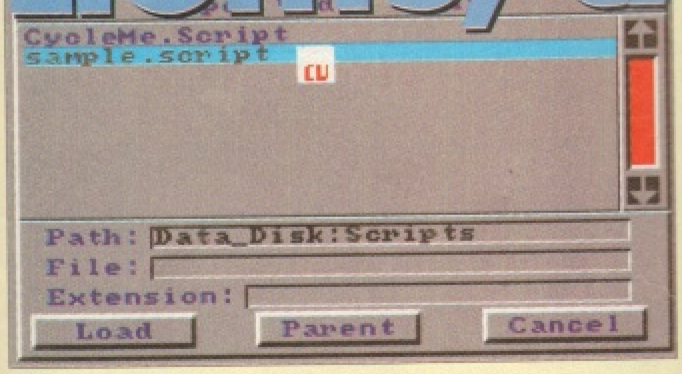
your first frame. If you want a background, load that in as before, then get yourself some text. A spinning or zooming title is probably the easiest thing to try first. Once you've got your first frame, select ANIM -> OPEN FRAME from the project menu (or press ENTER on the keypad). If your animation disk isn't in the drive, the program will ask you to replace it. Do so, and the first frame will be saved out. Now you can get on with the next frame. Try slightly enlarging the text , or rotating it a little. Press ENTER or select ANIM -> OPEN FRAME once more, and so on until you think you've got enough frames. When you've finished, select ANIM -> CLOSE ANIM from the project menu.

You can't actually play back your animations from the *Videotitler* program. As the files you end up with are standard .ANIM format, you can play them from CLI with PD utilities such as SHOWANIM and PLAYANIM, or load them into *Deluxe Paint 4*. Alternatively, you can view them with *Lights, Camera, Action*, the other half of the Videotitler package.



Animate your credits by moving or warping the text slightly, selecting ADD FRAME and repeating the process.

LIGHTS, CAMERA, ACTION!



Lights Camera Action has a couple of demo presentations. Choose either of them from the ANIMS directory on the data disk.

ROLL 'EM

While the *Videotitler* program takes care of your basic titling needs, *Lights, Camera, Action* (LCA) helps turn a collection of pictures , sound effects, titles and music into one free-rolling séquence.

Unlike *Videotitler, LCA* works with a combination of menus and icons. There are two demo sequences included on the disk. To load one, select OPEN SCRIPT from the project menu. Remove the first disk, and replace it with the second. Click on the volume name DATA_DISK that has just appeared in the requester, followed by SCRIPTS, and finally double click on SAMPLE.SCRIPT. The screen will now revert to the main control panel. Move up to the VIDEO menu and select PLAY ONCE.

Assuming you've done all of the above correctly, you should now be enjoying a sequence called Around The World. After it's played through, you'll be brought back to the control panel. Select PLAY ONCE or PLAY LOOP from the VIDEO menu if you want to see it again. The best way to learn how to create your own presentations is to examine the demo and see how it's been made up.

THE PLAYLIST

Any sequence you create with *LCA* is made up from a list of events. At the moment you should be able to see the first five events in the list. Each event is numbered, and a brief description of it is displayed in the corresponding slot on the right. You can scroll through the list by clicking the mouse on the arrow icons on the left of the panel. The single arrows scroll the list in steps of one, while the double arrows jump to the first and last events in the sequence. Use the arrow icons to scroll event number 12 into view. Click on the box to the right that says NEW YORK, then click on the EDIT button. The screen now changes to give you a much more detailed breakdown of the current event.

It looks a bit complex at first, but you only need pay attention to certain parameters, depending on the current process. The most important part of this panel is the box at the top left of the screen, which denotes the type of event. In this case, it reads SHOW STILL. This is just one of many events or commands, and tells the computer to load and display an IFF picture file.

THE COMMANDS

To see what other commands are available, move up to the box and hold down the left mouse button. You'll now see a menu drop down from the box. Operate this just like a standard menu, but with the left button instead of the ➤

IF YOUR DISK WON'T LOAD

In the unlikely event of your CU Amiga coverdisks not loading, remove all cartridges and peripherals, double check that you've followed the instructions exactly, and try again. If they still won't load, pop the offending disks in an envelope and send them to: CU DISK RETURNS, PC WISE, DOWLAIS TOP BUSINESS PARK, MERTHYR TYDFIL, MID-GLAMORGAN, CF48 2YY. They will then test your disk and send you a replacement as soon as possible. For any urgent problems though, please ring the PC Wise helpline on 0685 350505. This line can be reached between the hours of 10.30 and 12.30 weekdays. Whilst CU Amiga makes every effort to check our coverdisks for all known viruses, we can accept no responsibility for possible damage caused by viruses which may have escaped our attention.


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Programmed by Simis Ltd. Graphics The Kremlin. Sound Martin Walker
Produced by Jim Tripp AV-8B Harrier Assault © 1992 Domark Group Ltd.
IBM PC Screenshots
Published by Domark Software Ltd.
Ferry House 51-57 Lacy Road, Putney, London SW15 1PH
SIMIS



Play the sequence by selecting PLAY ONCE from the VIDEO menu.

right. Peruse the various options available, and then select SHOW STILL. Next, locate the box marked NEW YORK, to the right of the word FILE. This is the filename of the picture to be loaded and displayed. Click on it, and a file requester will pop up, displaying a listing of the PICS directory. Double click on any filename other than NEW YORK. Click the button marked OK to get back to the main control panel.

Now run the sequence again with PLAY ONCE from the VIDEO menu, and watch out for your new picture near the start. Double click the right mouse button to quit from the animation back to the control panel. Locate event 12 again, select it, and click the EDIT button. This time have a go at altering the type of fade it uses to get from one picture to another. The bottom section of the edit screen houses all the fade controls. Pick a new one, then go back and run the sequence again to see the effect. Try a few more until you've got an idea of what they all do. You can also change the parameters for the wipes, such as the speed, which is controlled with the slider in the middle of the panel.

FORWARD PLANNING

To get your presentations running smoothly, you sometimes need to put a bit of forethought into your playlist. For example, it's no problem waiting a few seconds for an IFF picture file to be loaded, but let's say you want to include an animation sequence somewhere in the middle, you don't want the whole thing to grind to a halt halfway through, as it loads in the frames from disk. The solution is to load the .ANIM file at the start of the sequence, so that when you call it up, it's already in memory.

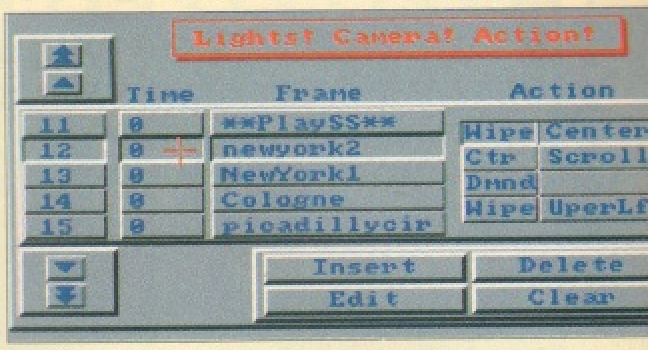
Scroll the list so that event 4 comes into view, and you'll see it's labelled SAMPLE.ANIM. Click on it, and then on the EDIT button. The top left box on the edit screen now contains the words LOAD BUFF. This stands for load buffer. A buffer is a temporary storage area set aside in the memory. Beneath LOAD BUFF box, in the box marked BUFF, is the number 1. This defines which buffer the data is to be loaded into. Just across the screen you'll see the filename SAMPLE.ANIM. This is the animation used as the opening screen of the sequence, which displays the Aegis logo and the Around the World title. However, it's not until event number 10 that it's actually shown. Go back to the control panel, select event 10, and click on EDIT, and you can see the command that puts it up on screen. The top left box reads PLAY BUFF, and the buffer window beneath it contains the number one. This says that the data in buffer 1 is an animation, and it should be played now.

Have a go at swapping this animation for one of your own. Edit event number 4, click on the SAMPLE.ANIM filename box, and choose another animation from the file requester. Any standard .ANIM file will work, so long as there's enough memory to store it. If you've already created an animation with *Videotitler*, or anything with the recent CU Coverdisks *Expert 4D* or *Videoscape 3D*, load those in.

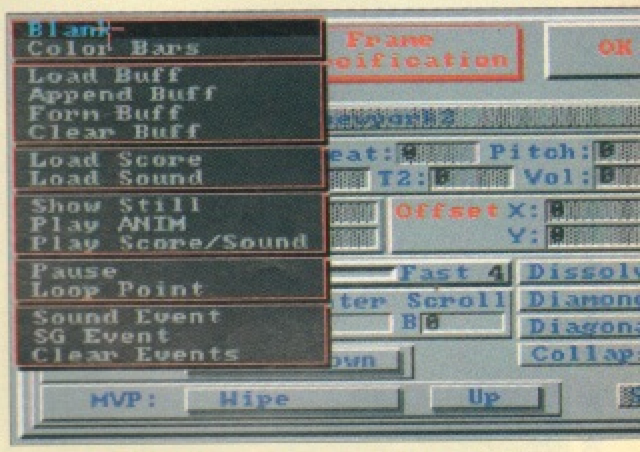
SOUND ADVICE

Music can also be added to your creations, but it must be in Sonix format. Load your samples and tunes into buffers at the start of the playlist, and then play them at any point you like, just as you did with the animation files.

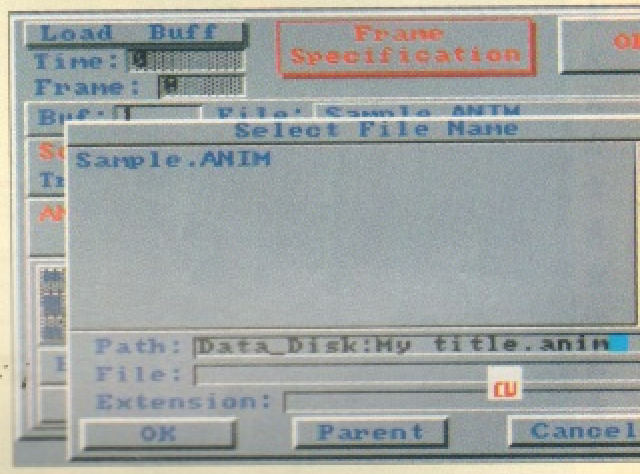
Experimentation is the best way to get to grips with the system. After a while, putting together a long sequence of animations and displays will become second nature.



Here's the playlist – the running order for all the fades, animations and music in the sequence.



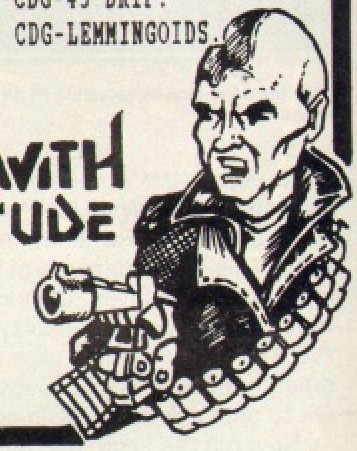
Highlight an entry in the playlist, click on EDIT, and you can alter its parameters with the numerous gadgets.



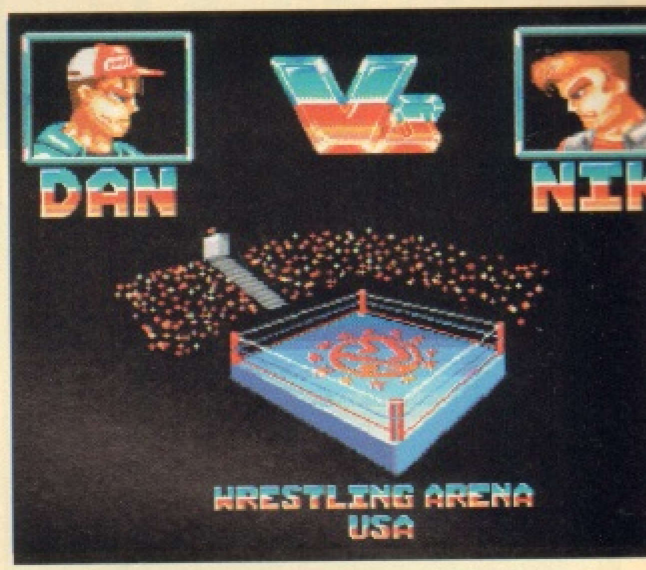
Animation files created with just about any Amiga animation package can be imported and included in your sequences.



Jump back to the main control panel, run the presentation again, and admire your alterations.

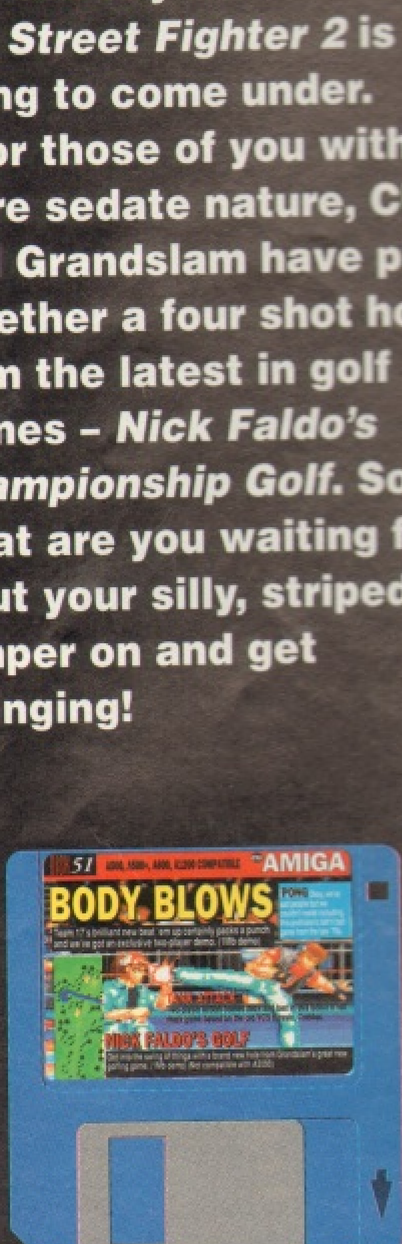


COVERDISKS



CU Amiga has joined forces with Team 17 to give you an exclusive two player demo of the the hottest beat 'em up this side of Christmas, so you can see for yourself exactly what kind of fire *Street Fighter 2* is going to come under.

For those of you with a more sedate nature, CU and Grandslam have put together a four shot hole from the latest in golf games – *Nick Faldo's Championship Golf*. So, what are you waiting for – put your silly, striped jumper on and get swinging!

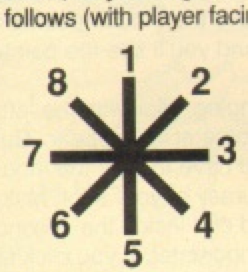


BODY BLOWS

No doubt most of you will already be gagging to get your hands on this incredible beat 'em up from Team 17, especially after Dan Slingsby raved about it in last month's in-depth preview.

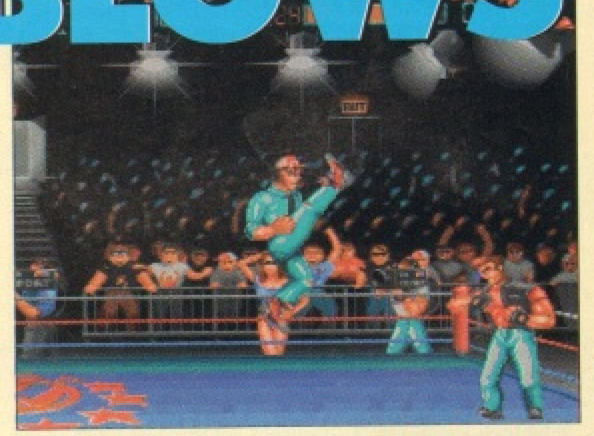
Our demo is a timed match between Dan and Nik – the two brothers from the game and not the editorial staff from this mag! The 60-second fight takes place in the wrestling arena and should give you a taste of how the finished version will look.

At the top of the screen are the characters' energy bars. These both start red and, with each hit received, they slowly drop. When the level has dropped completely, the player is dead. In between these is the timer. Remember, you only have sixty seconds to cream your opponent, so you've got to work fast. Controls are as follows (with player facing right):



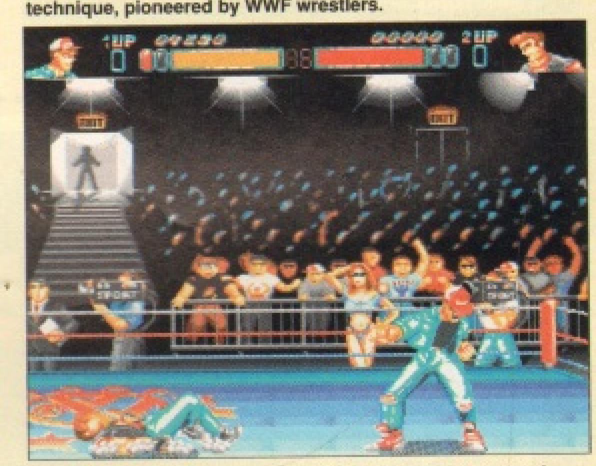
Without Fire Button:	With Fire Button:
1. Jump Up	1. Chest Kick
2. Jump Forward	2. Uppercut Jump
3. Walk Forward	3. Forearm smash
4. Slide forward	4. Sliding Kick
5. Crouch	5. Low Kick
6. Crouch/Block	6. Low Punch
7. Walk Backwards	7. Standing Block
8. Jump backwards	8. Roundhouse Spin

Just in case you want to cause a little more damage, how about trying out a special move. As with *Street Fighter 2*, each character has little magical moves that cause premium amounts of damage if performed correctly. In the case of Dan and Nik, both can launch fireballs if left alone for long enough. All you have to do is hold down the fire button until the small box next to your energy meter fills with red. This shows that fireball is primed. Simply release the button to send the fireball out.





Nik tries the famous 'jump on his head and see if he screams' technique, pioneered by WWF wrestlers.



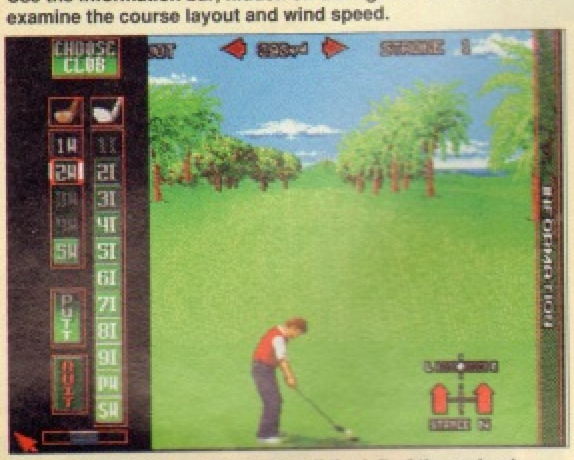
When he wins, Dan is prone to a little over exuberance and often gives a two fingered salute to the crowd!

LOADING COVERDISK 51 To load Coverdisk 51, just insert it in your Amiga's drive and switch on. Within seconds icons will appear for each demo/game. Just position the cursor on the one you want to run and click with the left mouse button. Moments later the demo will be ready to play. Remember, your Amiga must have at least 1Mb of memory for you to be able to play *Body Blows* or *Nick Faldo's Golf*. If you have difficulty loading your disk please contact PC Wise at the address or telephone number given in the box on page 12.

NICK FALDO'S CHAMPIONSHIP GOLF



Use the information bar, hidden off the right of the screen to examine the course layout and wind speed.



The club selection bar is hidden off the left of the main play area. Use it to... well, select your club.



Turn the golfer slightly when he faces a hazard directly ahead.

With games like *Microprose Golf* and *Links* already on the market, you'd have thought the world has seen the best golf games the Amiga is capable of. Perhaps not, as Grandslam have come up with a real birdie – *Nick Faldo's Championship Golf*. Imagine the glorious graphics of *Links*, with the speed of *Leaderboard*. Now, when you've finished drooling, take a look at the playable demo on this month's disk.

What you have here is a full, par four hole. The difference between our demo and the finished game is that here you only have four strokes to sink the ball. Aside from that, everything else is the same.

From loading you are presented with the tee-off. Looking around the screen you can see (from the top left corner clockwise) your name, the selected control method, the distance to the hole between two arrows that change your viewing direction, the number of the stroke, the information panel (move the mouse to the right of the screen to see this), your stance indicator, the power meter and the club selection panel (move the mouse to the left of the screen to bring this up). Let's try a shot.

Bring up the club selection panel and select the 1 Wood (1W) with the left mouse button. Leave the power setting on 100% and bring up the information panel. Click on the map to see the direction of the wind. Going back to the main screen, you'll see a crosshair. This aims the ball, so you might want to alter it slightly to cut a little into the wind. If the wind is blowing right, then aim a little to the left. That done, move the mouse pointer to between the golfer's feet, and you'll see the pointer change to a curved arrow.

To get swinging, click with the left mouse button, and the swingometer will appear. This is the tricky part. Here, you have to click the mouse button twice to set the accuracy of your shot. Make sure the clicks start and end inside the second marked section in the swingometer. If you click too early the ball will hook, and if your second click is to the right of the section then the ball will slice. The first area adds extra power to the shot and is not necessary for a simple shot. When you have clicked twice, the shot will be taken, and all you can do is pray.

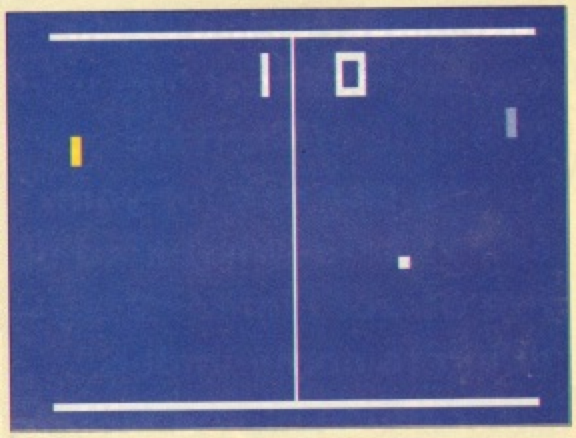
It takes a fair bit of practice, but then again Nick Faldo didn't become a world class golfer overnight.

PONG

If you cast your mind back about 14 years, you might just remember that Grandstand's *Pong* was considered to be the future of home entertainment. How we thrilled to the sight of those two rectangles as they bounced a small square block between them. Here we have the best conversion yet of that classic game, and one or two others to boot, namely football, two-player squash and single player squash.

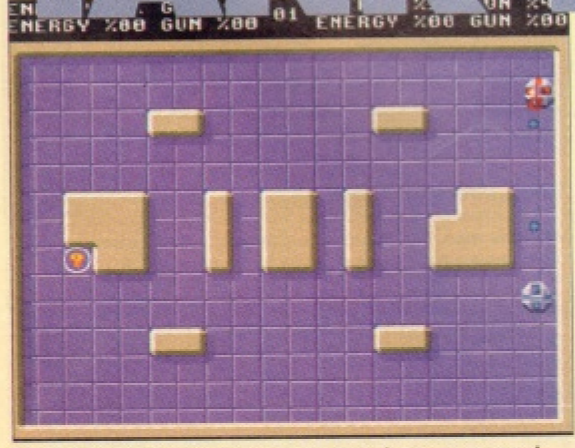
In tennis, the idea is to knock the ball past your opponent 15 times before they do. Squash is exactly the same, except that instead of sending the ball across the screen to the other player, it bounces back off a wall towards them. Football is the unusual one here as you control two bats instead of one (a goalkeeper and an attacker).

Controls are joystick, mouse or keyboard, and full playing instructions can be found in the enclosed document file.



SPECIAL THANKS For services above and beyond the call of duty, CU Amiga would like to extend a big thankyou to Choice Software of Sheffield. This issue's disks were compiled during the Christmas break and, as neither Dan nor Kenny, our disk compiler, had access to an A600 at the time, Choice Software kindly stepped in and let us use one of their machine's to test out our disks. Soooo, if you live in or around the Sheffield area and want to pay them a visit, pop along to 144 London Road, S2 4JT. The shop covers a massive range of Amiga software and peripherals, plus over 1500 PD disks at only 99 pence each. Phone for a free catalogue disk on 0742 555894. And thanks once again, lads.

TANK BATTLE



Avoid the other tank and pick up as many bonuses as possible. Be warned, some bonuses are not what they seem to be!

Another classic game, *Combat* was only to be found on the Atari VCS2600, that age old machine with the wood effect slats across its front. Again, the idea was blindingly simple, and one that has been adapted and mutated throughout the years. *Tank Battle* is its latest incarnation, and bloody good it is too.

Up to four people can play at once, but no less than two. You begin at opposite ends of the arena – a large square room with walls and obstacles all over the place, sat in tanks capable of firing rubber bullets, which bounce off walls and barriers until they expire. The aim is to blow the opposition away. Sounds easy, sure, but remember that they are trying to do the same to you, and being that at any one time up to a dozen bullets can be bouncing around, things can get a little hairy.

Bonuses appear at random intervals in the shape of skulls. Run over these and your ship could be graced with invisibility, high speed or a temporary shield. Then again, you might slow down, or your bullets might lose the capacity to bounce. There's no way of telling which pod does what, so you'll have to chance it.

At the top of the screen is your energy level and your gun heat level. If your gun overheats, it packs in, so be careful. If that happens, there's nothing left to do but run and hide until your gun cools down. The function keys define the various options, including one and two player games and the variable control method. *Tank Battle* can be controlled by joystick or keyboard, and full instructions are in the documentation file on disk.

GET READY 4 THE INVASION

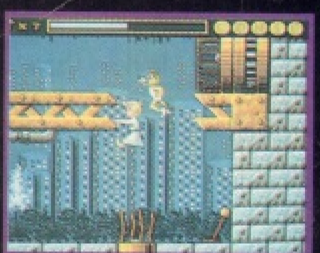
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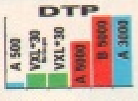
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These chips cover practically every popular memory expansion or Hard Drive system on the market for the Amiga ie. GVP, SUPRA, MICROBOTICS, COMMODORE

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9 PIN colour printer with paper parking, eight fonts and electronic DIP switches.
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24 PIN with compressed data mode, 16 K buffer and 10 letter quality fonts,(with Star printer driver only).
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LC-200 Colour...................................£199.99
LC24-20...£199.99
LC24-200 Mono £219.99
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SJ48 Bubblejet .... NOW ONLY £219.99
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Swift 240 Mono.................. NEW! £254.99
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Swift 200 Mono.................. NEW! £187.99
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300 dpi laser quality output • sharp blacks and 16 million colours available • six built in type faces-4 scalable • improved media handling • several paper sizes • **FOUR TIMES FASTER** than previous H.P. Deskjet range.
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STAR LC20...£57.99
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STAR LC24-200..................................£62.99
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STAR SJ48...£49.99

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CANON BJ 10eX.........................£214.99
Upgraded version of BJ10e, the worlds biggest selling portable inkjet printer.
CANON BJ 20..............................£319.99
More Features than the BJ10, includes Auto sheet feeder. Top selling-Highly Recommended
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Feature include: 300 dpi. • Min 80 page Auto sheet feeder • minimum 3 pages per minute **SUPER VALUE!**
CANON BJ 300.............................£374.99
80 column bubblejet provides laser quality output.
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CANON Bubblejet cartridges............£17.99
BJ 10eX Autosheet feeder..................£49.99

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We have a large range of **high quality** printer accessories for all the printers we sell including **dust covers from £2.99 • Ink cartridges from £13.99 • Mono ribbons from £3.50 • Colour ribbons from £7.99 • Printer stands from £7.99**

TRAIL BLAZERS-WHAT'S NEW IN FEBRUARY 1993!

In this month's pre-christmas "TRAIL BLAZERS," we focus on some of the best products and peripherals currently on release for the Amiga.

PHOENIX 1Mb A600 UPGRADE

Simply the Best !

...£44.99

ROCTEC ROCLITE

This famous super slim drive has now been upgraded to include Anti-click and virus checker - We have reluctantly had to raise the price of this product due to the variance of the dollar rate. However to soften the blow we will include a FREE disk head cleaner worth £3.99

Phoenix price..........£64.99

CANON BJ 200

This printer boasts an ultra compact design and generates 300 dpi resolution output giving you near laser quality. With draft quality print at up to 240 CPS (3 pages per minute), high quality print at 170 CPS and a built in 80 sheet auto sheet feeder this is the ultimate BJ!

Phoenix price.........£347.99

FINAL COPY 2-UK VERSION

This powerful, unique WYSIWYG word processing package is the best value choice for your Amiga, sharing many of the features of full-blown DTP packages

Phoenix price.........£69.99

Be safe in the knowledge that you are buying the official UK version of the product from Phoenix. *BEWARE of dealers offering "Latest version" of Final Copy. This may be American product and should not be sold in the UK!*

AMOS PROFESSIONAL

The most eagerly awaited software package of the year, has just received an award of 97% in CU AMIGA. Francois Lionet's superb creation has now evolved to include numerous new features developed from Amiga users ideas and feedback. Don't miss this six disk Bonanza!

Phoenix price £44.99

POWER SCANNER v3.0

Powerful image processing tools for the office or the home environment.

Power Features include: 100-400 dpi • 64-Greyscales Thruport to printer • FREE VERSION 3.0 SOFTWARE

Phoenix price.......£109.99

MICE & TRACKBALLS

Roctec Mouse..........£13.99

GOLDEN IMAGE

Mega Mouse..........£12.99
(Has just received 90% Amiga Format Gold Award)

Optical Mouse..........£29.99
High precision, pointing device.

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Infrared-Cordless-Mouse... NEW! £47.99
(Rechargeable top selling innovation.)

Optical Pen Mouse.......... NEW! £39.99

High Quality 8mm mouse Mats..........£3.99

Auto Mouse/Joystick Switch..........£15.99

Don't damage your Amiga's ports! This device saves wear and tear makes switchover ***FAST***, and does **NOT** require power unlike many others.

SCANNERS

Powerful image processing tools for the office or the home environment.

POWER-Features include: 100-400 dpi • 64-Greyscales Thruport to printer • FREE Editing software.

Power Scanner v3.0.. NEW £109.99
Includes FREE upgraded editing software.

Power Scanner Colour..........£234.99

GOLDEN IMAGE-Hand Scanner Series

Features: 400 dpi • 256-Greyscale • Touch up and Merge it software.

AlfaScan £124.99

AlfaScan Plus £149.99

AlfaScan OCR *(inc OCR Software)*..........£279.99

AMIGA MUSIC

Attention all you music lovers! Phoenix have kept this unbeatable music deal running for you into the New Year.

MUSIC-X Jnr....only £15.00
When purchasing either a Phoenix Stereo Sampler or Pro Midi 2 Interface
Please Note: this is a limited offer only while stocks last!

Stereo Sampler.......... NOW ONLY £29.99
Combines ease of use with state of the art analogue to digital conversion technology.(inc. FREE sample editing software +audio lead)

Pro-Midi 2 Interface..........£24.99
This fully featured professional quality midi interface is very flexible giving semi-patch bay facilities. It has five ports in, out, thru and two switchable out/thru. (inc. FREE midi lead)

GVP Digital Sound Studio..........£54.99
High quality sound sampler for all Amiga Computers

Amiga Music Made Easy-Only from Phoenix!

AMIGA RELEASE 2

Now Only..£79.99

The popular upgrade kit for 1.2 / 1.3 owners from Commodore is in stock and selling fast!

PHOENIX ROM SHARERS

Keyboard ROM Sharer..........£29.99

Standard ROM Sharer..........£24.99

Rev 3.5 ROM Sharer..........£27.99

1.3 ROM..........£27.99

2.0 ROM..........£34.99

DISKS

Don't confuse these quality disks with others currently available. 3.5" 100% certified error free 70% clip. All disks include FREE high quality Phoenix labels.

10	£4.99	200	£72.99
25	£12.99	500	£174.99
50	£22.99	750	£259.99
100	£39.99	1000	£339.99

Dysan Branded disks- High pêrformance media from the experts-box 10 with labels and FREE 10 Cap plastic storage box

10	£5.99	100	£52.99
50	£26.99	500	£249.99

1000 Phoenix Disk Labels..........£9.99

DISK DRIVES

All drives feature super slim design, enable-disable switch, thru port and come with a 1 year replacement guarantee!

Phoenix Deluxe Drive..........£49.99

Roctec Roclite.......... NEW! £64.99
This famous drive has now been upgraded to include Anticlick and Virus Checker

Disk head cleaner..........£3.99

LEADS & CABLES

Midi-Midi 2m	£3.99	Modulator ext.	£9.99
Midi-Midi 3m	£4.99	Amiga-Scart	£9.99
Midi-Midi 5m	£5.99	Amiga-8833MkII	£9.99
Disk Drive ext.	£9.99	Joystick long ext.	£4.99

Mouse/Joystick ext..........£4.99
Mouse/Joystick splitter..........£4.99
*Serial/Modem cables..........£9.99
*Amiga-Multisync..........from £9.99
*Amiga-Microvitec..........£9.99
*Amiga-CPC monitor..........£9.99
*Amiga-RGB/TV..........£9.99
*SCSI Cable various..........£9.99

Printer 1.8m..........£5.99 Printer 2.0m HQ..........£7.99

***For full details of these cables or information regarding the right cable for the job call 0532-311684. Custom built leads are no problem.**

ACCESSORIES

Control Centre..........£34.99
Heavy duty construction, rubber edging, perfect colour match, makes an ideal workstation for the A500/A500+ **A 600 control centre now available.**

Phoenix Stereo speakers..... NEW! £37.99
Superb sound and excellent dynamics. These two-way stereo Hi-Fi speakers are an Amiga standard- **Excellent companions on any gaming soiree!**

DATA SWITCHES-*(25 pin D type)*

2 way..........£15.99
3 way..........£17.99
4 way..........£19.99

STORAGE:

90 Capacity BANX..........£11.99
150 Capacity POSSO..........£16.99

Disk Box 10 Cap..........£1.99
Disk Box 25 Cap..........£2.99
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MULTI-MEDIA

Rombo's Vidi Amiga 12 is the replacement for their complete colour solution bringing you the world's first mass market colour digitiser for **under £100.**

VIDI-AMIGA 12 .... ONLY £79.99
Outstanding features and plenty of **VFM!**-*(Value for money!)*-Highly Recommended.

ROCGEN Plus..........£129.99
Quality features and performance-Recommended.

A 570 CD ROM

This Amiga essential heralds the dawn of multi-media-suitable for A500/A500+ /A570.

Phoenix price... ONLY £299.99

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NEW TITLES....STOP PRESS ...NEW TITLES...

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Clarity 16..........£107.99
Video Master..........£52.99
Pagestream Bussiness Forms..........£29.99
Morph Plus..........£149.99
Image master..........£129.99
Big Alternative Scroller v2.0..........£59.99
Amiback v2.0..........£42.99
Techno Sound Turbo..........£29.99
System 3E..........£49.99
Deluxe Paint 4.5 (AA)..........£69.99
Hotlines v1.1..........£62.99

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Kindwords 3..........£36.99
Final Copy 2 .... NEW! £69.99
Professional Page 3.......... NEW! £129.99
Pagestream v2.2 ....£126.99
Pagestream Font pack 1 ....£44.99
Pen Pal 1.4.......... SPECIAL OFFER £39.99
Hot Links..........£52.99
Wordworth V 2.0.......... NEW! £72.99
now includes 17 Compugraphic fonts!

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Mini Office .... NEW! £39.99

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Professional Draw 3 ...... SPECIAL OFFER £79.99
Intro CAD Plus £74.99
X CAD 2000 ....£99.99
X CAD 3000 ....£269.99

UTILITIES

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A-Talk 3 ....£44.99
Cross Dos v5 *(inc, Cross PC Emulator)*..........£29.99
Diskmaster 2 ....£43.99
Dos 2 Dos £29.99
Opus Directory v4.0 .... NEW! £49.99
Xcopy £36.99
Quarter Back £45.99
Quarter Back Tools Vs 5..........£49.99

DATABASE

Superbase Pro 4 ....£164.99
Superbase Pers 2 .... NOW ONLY £39.99

VIDEO PRODUCTION/TITLING

SCALA 500 ....£79.99
SCALA Professional £219.99
Big Alternative Scroller £35.99
Broadcast Titler 2 ....£179.99
Font Pack 1 for Broadcast Titler 2..........£88.99
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TV Show Pro £51.99
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Race Trace .... NEW! £93.99
Deluxe Paint 4 ....£63.99
Deluxe Video 3 ....£71.99
Image Finder £44.99
Pro Vista £71.99

ANIMATION

Take 2 ....£42.99
Image Master £129.99
3-D Images £36.99
Amos £36.99
Amos Professional.......... NEW! £44.99
(97% in CU Amiga-Software release of the year)

Amos Compiler £21.99
Amos 3D £25.99
Easy Amos £22.99
Deluxe Paint 4 ....£63.99
Director v2 ....£71.99
Imagine v2.......... NOW ONLY £189.99
Map master for Imagine £59.99
Presentation Master £169.99
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PRESENTATION & SLIDE SHOW

Art Department Pro Conv. Kit £57.99
Can Do It V.I.G £94.99
Hyper Book £44.99

ACCOUNTING

Personal Finance.......... NEW! £29.99
Arena Accounts £83.99
Home Accounts 2 ....£39.99
System 3 ....£43.99
Cashbook Combo £57.99

We all want faster computers, but as accelerator prices tumble, an important decision faces Amiga owners: upgrade the present system, or go for the next generation? John Kennedy helps you make your mind up, with the most comprehensive comparison of available hardware yet.

the need for speed



THE CHOICE IS YOURS

OK, so you have an A500 or an A600 and you don't know what to do. Is the new A1200 really all it's hyped up to be? What about software incompatibilities? What is Fast RAM, and do I need it? These are the questions that many Amiga stalwarts may be asking themselves while they flick through the advertisements in the computer press. So, to help you make up your mind, the CU Amiga team have been taking a look at which upgrade path offers the better deal.

THE AMIGAS

The two Amigas used in this test were an A500Plus – the shortest lived Amiga ever – and the all-new A1200.

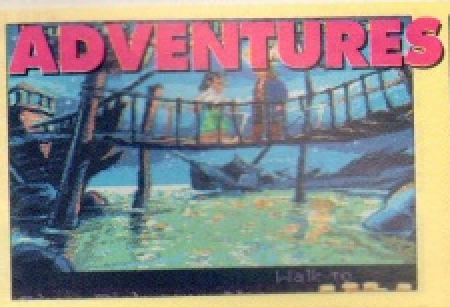
The A500Plus comes as standard with 1Mb of Chip RAM, but in this article it was kitted out with an extra 2Mb of 16 bit Fast RAM. The bog-standard 7MHz Motorola MC68000 on the motherboard was replaced with a 16MHz 68020 in the form of a SSL A5000 accelerator card, complete with a 16MHz FPU and 1Mb of 32 bit RAM.

The A1200 comes with 2Mb of 32 bit Chip RAM, and a 68020 processor running at 14MHz. It was also given one of the first peripherals available, namely a Microbotics MBX1200. This card includes some extra 32 bit Fast memory and an 14MHz FPU. The A1200 was also fitted with a

THE GAMES

Games are important to Amiga owners. So how will upgrading the hardware affect the speed and performance of the software?

ADVENTURES



MONKEY ISLAND 2 – LECHUCK'S REVENGE

Compatible with A5000: Yes
Compatible with A1200: Yes
Hard drive install: Yes
Comments: This 11 disk adventure epic relies on its puzzles and graphics to ensure gripping gameplay, and so running it at 50MHz 68060 wouldn't make any improvements.



ISHAR – LEGEND OF THE FORTRESS

Compatible with A5000: Yes
Compatible with A1200: No – makes extremely nasty disk noises.
Hard drive install: Yes
Comments: Still slow.



ELVIRA II – THE JAWS OF CERBERUS

Compatible with A5000: Yes
Compatible with A1200: No
Hard drive install: Yes
Comments: Any speed increase is missed on me.

Commodore-sanctioned 60Mb hard drive.

The Amiga A1200 is the first sub-A3000 Amiga to feature 32 bit access to the Chip RAM – the memory used by the custom chips. As games in particular make heavy use of the custom chips for graphics and sound, the ability to access this memory faster can result in substantial speed increases. At the moment it is impossible to add 32 bit Chip memory to standard Amigas, such as the A500. If an add-on card ever does become available, it is unlikely the cost involved would be worthwhile.

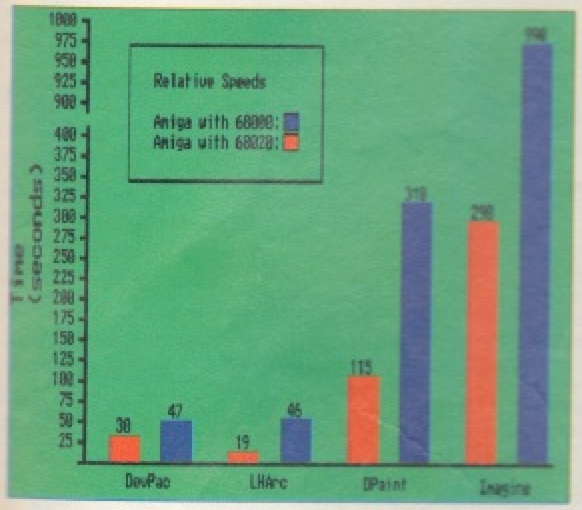
A5000

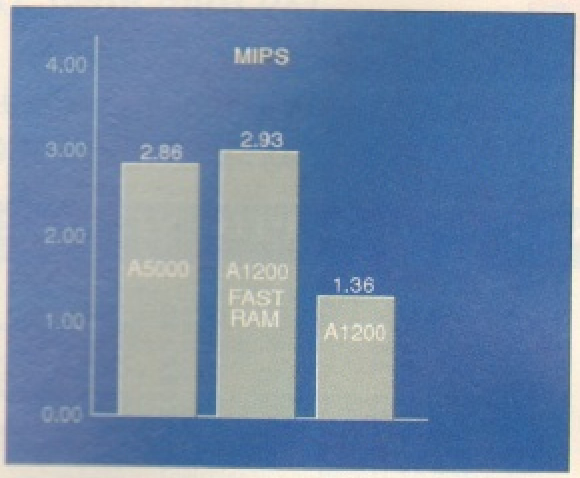
The A5000 accelerator card for Solid State Leisure has been mentioned more than once in these hallowed pages, the last occasion being in the October 1992 issue. In those days the A5000 had been cut in price to £250, and now it has been cut again, to a bargain hunters dream of £160. Although this may upset those that spent £250 (sounds like SSL are copying Commodore's marketing policy) this is good news for the rest of us, as the A5000 is an excellent piece of kit

The A5000 provides a Motorola 68020 processor, although unlike the A1200 it runs asynchronously at 16.6 MHz. This means that the processor is not locked to one frequency like the A1200 CPU, but makes use of any spare bus time to run that little bit faster. This is why the MIPS rating is ever so slightly faster for the A5000.

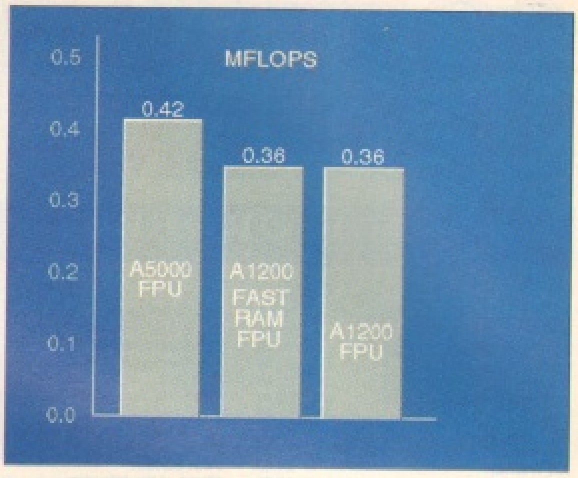
A large square circuit board, the A5000 fits into the 68000 socket on the Amiga motherboard. The 68000 is placed in a special socket on the A5000, and this provides a special 'fall back' mode for awkward software.

Caption Caption Caption Caption Caption Caption Caption





Using SysInfo V3.01, the relative speeds of the A5000 and A1200 (with and without fast RAM) were measured.



The speed of the FPU is determined by its speed. The A5000 clearly has the edge as it operates at 16MHz.

A 68881 maths co-processor (or FPU) comes as standard, which makes all the difference with intensive maths programs such as fractal generators and ray tracers. If desired, a faster co-processor can be added and a socket is provided to accept the required clocking crystal. It's interesting to note that the processor and the co-processor do not need to run at the same speed – it is entirely possible for a 16MHz 68020 to be connected to a 20MHz FPU.

Memory expansion is a doddle with the A5000, as cheap RAM chips suitable for the A590 hard drive can be used. The accelerator comes with 1Mb as standard, and this can be increased to 4Mb in 1Mb increments. By means of cunning on-board hardware trickery, the system ROM can be shadowed in this memory to provide a further, albeit slight, increase in speed. This is possible because the expansion memory is a full 32 bits wide, which means it can be accessed a lot faster than normal RAM. On a A500Plus machine, the additional size of the ROM means that shadowing will use half a megabyte of RAM and is therefore not always a good idea.

MBX1200

Not content with the A1200, we decided to boost its performance even more. The results make interesting reading, as we discovered that Commodore are selling a machine operating at only half its potential.

The MBX1200 from MicroBotics is the peripheral that every A1200 owner will soon be lusting after. In one trapdoor-filling card it solves both memory and co-processor needs with a complete 'fire and forget' solution: you just fire it in the slot and forget all about it.

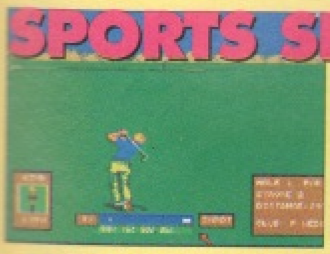
The card comes with a 14MHz 68881 FPU, and a socket to accept additional SIMM modules. The card we were supplied with came with a 4Mb SIMM, but 1Mb, 2Mb or 8Mb versions are available. The SIMMs need to be of the special 32 bit 'wide-body' variety, so prices are a little high at present. As there is only one SIMM slot, some thought should be given at the time of purchase as to the memory required. It's about time someone set up a second hand memory exchange program! After several week's use, 4Mbs seems to suffice for all but heavy duty purposes.

When an 8Mb SIMM is used, problems can arise with the addressing of the PCMCIA credit card slot memory, so Microbotics supply a special piece of software to try and sort this out.

As the MBX fills the trapdoor so completely, you may have a little trouble cramming one in. It looks as though it should take approximately 15 seconds, but it took me closer to 15 minutes to manoeuvre the card, locate the edge connectors and timidly push it home. However, once the A1200 was up and running, the improvement was stunning. Not only did my graphics programs run quicker because of the FPU, but system performance in general was improved by the addition of the 4Mb Fast RAM.

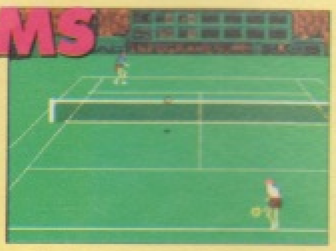
A1200s ship with 2Mbs, but all this RAM is Chip memory. This means that the custom chips always have priority, to the detriment of normal CPU operations. Check out the results table to see for yourself how the addition of Fast RAM improves overall processing power. Conversely, most games are designed to be run in Chip RAM, or make extensive use of the custom chips which amounts

SPORTS SIMS



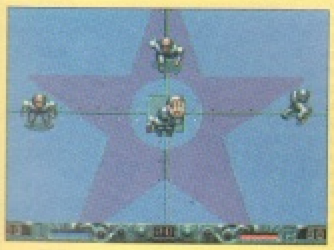
PGA TOUR GOLF

Compatible with A5000: Yes
Compatible with A1200: Yes
Hard drive install: Yes
Comments: Decent golf sim. Slight speed-up of 3D views and putting green.



ADVANTAGE TENNIS

Compatible with A5000: Yes
Compatible with A1200: Yes
Hard drive install: Almost. With a bit of fiddling you might manage it.
Comments: No real speed up noticeable.



SPEEDBALL2

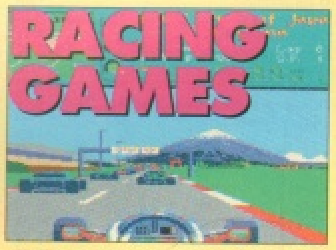
Compatible with A5000: Seems to works with 1.3 Amigas only.
Compatible with A1200: No
Hard drive install: No
Comments: Here the programmers have gone to all the trouble of writing 68020-friendly code, only to have the entire thing flop over when any chipset other than the original is used.



WWF WRESTLEMANIA

Compatible with A5000: No, not on an A500Plus anyway. Phew.
Compatible with A1200: No. Shame.
Hard drive install: No, who cares?
Comments: Oh dear, I didn't get to test this one. How I cried tears of bitter disappointment. Not.

RACING GAMES



VROOM

Compatible with A5000: No – needs 68000 fall back mode.
Compatible with A1200: No
Hard drive install: No
Comments: Probably the most underrated 3D car racing game on the Amiga. It's fast, furious, linkable and darn good fun. Well, it is if you have an A500, for *Vroom* won't work on any machine with a 68020 processor.

to the same thing. Furthermore, many games are linked to the frame refresh rate to provide a flicker-free display. The upshot is that many games – typically fast arcade blasters – will show no noticeable speed-up, no matter what processor or memory type is available.

The MBX1200 is the one peripheral every A1200 owner needs, and if it came with a hardware clock it would be perfect. It wouldn't surprise me if it became as ubiquitous as 512k memory expansions are in A500s.

HARD DRIVES

In some cases the addition of a hard drive can make a program or game more enjoyable than any amount of speed could. Take *Monkey Island 2* as an example. Find anyone who has played this 11 disk epic for any length of time, and you'll find someone in danger of getting Repetitive Strain Injury and DDW (disk drive wrist). Once you install this game (a technical term meaning 'copy') to a hard drive, you banish all disk swaps for good and also stop any tedious little pauses whilst stages are loaded.

Any serious degree of effort at the Workbench also immediately benefits from the addition of a hard drive. When your preference settings, your tools and system commands, your amazing 256 colour backdrop and all your programs are available 10 seconds after switching on, productivity takes a giant leap forward.

Although at the time of writing there is no official way of upgrading the A1200 to include a hard drive (so beware if thinking about buying one), Commodore have told us that such a system will be available 'very soon'. As we have probably the only totally legal hard drive based A1200 in the country, you can expect an exclusive review imminently. In the meantime suffice to say that it's totally wicked.

CHIPS 'R' US

The Amiga 1200 is an amazing machine, not least because of its powerful new microprocessor – the Motorola 68020. Although Commodore themselves have admitted the 68020 is not exactly a quantum leap in power over the 68000, it was still an amazing piece of silicon when it first appeared. Here was a processor which worked internally with full 32 bit wide architecture – a fact which not only sounded impressive at anorak and cider parties, but actually offered a real advance over both the original 68000 and the stop-gap 68010.

As far as first impressions went, the 68020 was always going to turn some heads. For starters it was no longer available in the oblong dual-in-line package, and if that wasn't reason enough to upgrade, it also came in versions which could be run at clock rates much faster than the 68000. When set beside the rival 8086 processor found in PCs, there was no competition. Even the new 80286 processor had trouble keeping up, partly due to its crippling backward compatibility.

The 68020 features both a 32 bit data bus and a complete 32 bit address bus, which immediately bumps up the memory addressing capacities into the dizzy regions of gigabytes, and what's more the addressing could even take place on odd boundaries without incurring system failures – unlike the 68000.

CACHE ON DELIVERY

Also new in the 68020 was an instruction cache – a particularly fast piece of memory incorporated into the processor to remember the last few instructions, and store some of those still to come. This cache makes a great difference to speed, but can also cause problems as we shall see.

The designers at Motorola used the new processor as an excuse to add some new instructions and addressing modes, but perhaps the most interesting addition was the complete interface for a

HOW EXPANDABLE IS THE A1200?

When it first appeared, many hardened Amiga nuts heaved a collective sigh of disappointment at the lack of an expansion port. Had Commodore done another A600 on them, and created a dead-end machine?

Thankfully the answer is no – in fact, the A1200 is probably the most flexible machine available, as it offers no less than four major expansion paths. Interestingly, some internal voices at Commodore have been heard to say warily that the A1200 might be too good, and draw away potential A4000 customers.

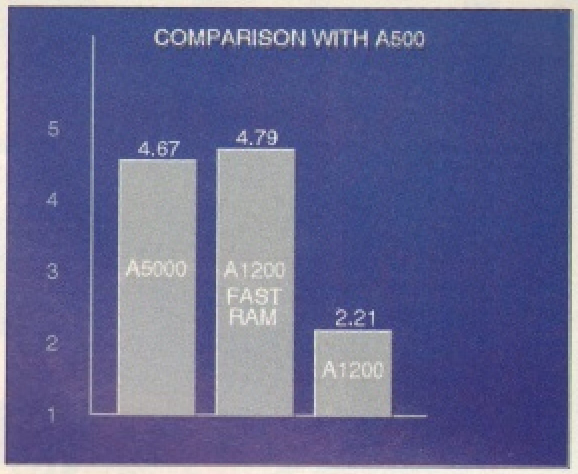
Those expansion routes in full:

- **The PCMCIA slot. It's taken a lot of abuse, but this industry standard interface is a quick, easy and powerful way of adding just about anything to a computer system. At the moment the Amiga market is limited to 2 and 4Mb RAM cards, but as time goes by we'll soon be seeing MODEMs, Hard drives, scanners, and maybe even SCSI interfaces fitting into that slot.**

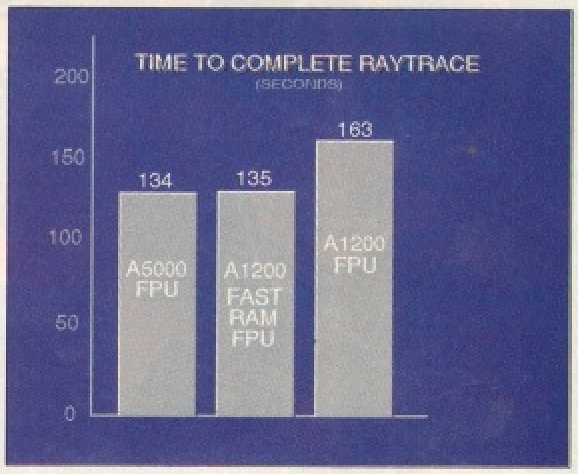
- **IDE interface. Another sore point with those in the know, but the ability to add a hard drive between 20Mb and 240Mb in size internally with no extra hardware is a major leap forward in the affordable Amiga market. IDE has been criticised as being too slow, but experiments with our system show that it is only 20% slower than the fastest A500 drive available, which means it is still 30 times faster than a floppy disk!**

- **Internal CPU slots. The double set of connectors inside the case of the A1200 may be what the sound and music addicts have been waiting for. If rumours are to be believed, this is where the long awaited DSP board will be situated. Other possible uses include processor and memory expansion.**

- **Trapdoor. The trapdoor on the A1200 is a vastly more advanced model than on the A500/600. Although a typical use will be the addition of memory (up to 8Mb of 32 bit wide SIMMs), it is also flexible enough to allow FPUs and even other processors (such as 68030s) to be added. SCSI interfaces can be connected here too, with the removable blanking panel at the rear allowing cable access.**



The graphs show how many times SysInfo thinks the accelerated Amigas are faster than a standard 1Mb A5000. The Fast RAM makes a large difference to the A1200.



Ray tracing is a good way to test raw processing power. The figures bear out the MIPS and MFLOPS results.



LOTUS TURBO CHALLENGE 2

Compatible with A5000: Yes – works best in fall back mode.
Compatible with A1200: Yes
Hard drive install: No
Comments: No problems. Slight speed-up whilst loading tracks.



MICROPROSE FORMULA ONE GRAND PRIX

Compatible with A5000: Yes
Compatible with A1200: Yes
Hard drive install: Yes
Comments: With no extra Fast memory, the A1200 lags behind the A5000 – but only slightly. Both versions are much faster and smoother than when on the A500.



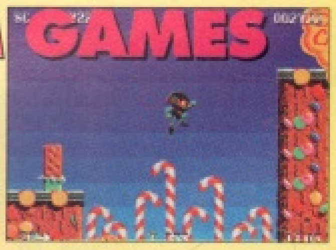
INDIANAPOLIS 500

Compatible with A5000: Yes
Compatible with A1200: Yes
Hard drive install: No
Comments: The speed up for this program is considerable compared to the standard processor, and transforms a rather yawn-inducing demo into an exciting game.



JAMES POND 2 – ROBOCOD

Compatible with A5000: Yes – in fallback mode
Compatible with A1200: Yes – with caches off and original chipset
Hard drive install: No
Comments: If *Mario* was a bionic fish with a stretchy middle, he'd be *James Pond*.



ZOOL

Compatible with A5000: Fall back only.
Compatible with A1200: Special version with enhanced graphics.
Hard drive install: No way, josé.
Comments: The special A1200 version of *Zool* is so completely fast that you'll be hard pressed to keep up with the action.


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THE PROS AND CONS OF UPGRADING

Of course, upgrading your Amiga might not be the most sensible course of action to take. Here, we access the pros and cons of such a move.

AGAINST

- Cost – an Amiga 1200 costs around £440. You'd be lucky to sell your A500 for half that, which leaves a considerable shortfall.

- Compatability – at the moment many games and 'serious' pieces of software (such as many sound sampling packages) do not work on the A1200. The serious software will eventually be re-written or replaced, but the chances of some classic games ever being updated are remote. If you sell your existing computer to upgrade, you may never play *Speedball 2* again.

- Upgrading – to upgrade an A500 to a slightly faster processor than the A1200, including an FPU and 1Mb of memory, costs £160. This is excellent value for money, and yet you still retain total software compatability. Other processors (68030 and 68040) can be added, which is not yet the case for the A1200.

- Speed – If the A1200 is not going to be expanded beyond its standard 2Mb – and to do so won't be cheap – some programs and games are actually going to run slightly faster on the A500 equipped with a 68020.

FOR

- Cost. For around £440 you get a brand spanking new Amiga, complete with 2Mb of RAM and a fast processor. The A1200 is now THE Amiga, and it will be the one that new products will be developed for.

- The new chipset. The AGA chips have a full 24 bit palette – that means 16 million possible colours instead of 4 thousand. The new graphics modes are amazing, with 256 or HAM8 colours in all resolutions. The HAM8 mode provides pseudo 18bit colour – unheard of in a machine at this price.

- Especially (some would say only) if you have a Workbench 1.3 machine, the upgrade to Workbench 3 is amazing. It's not just the colour scheme – everything is genuinely better.

- All new software will be compatible, and more and more will be written to take advantage of the capabilities.

- Street cred. If you have an A1200 you can make cheap jibes about numeric keypads to A600 owners.

special maths co-processor. By the simple addition of a 68881 or 68882 Chip (the '82 being nothing more than a slightly improved and faster version), programs which made extensive use of floating point arithmetic were given one heck of a turbo injection. Ray tracing programs especially are usually available in a special version to make use of the maths co-processors and can run several times faster than their integer equivalents.

The bigger brothers to the 68020 are the 68030 and 68040, with the latter quoted as reaching over 19 MIPS, which is three times as fast as the '030 and six times the speed of the '020.

PROBLEMS, PROBLEMS

Programs written originally to run on the 68000 can occasionally and spectacularly fail to operate on the 68020. The reasons for the incompatibility are almost entirely due to bad programming practice on behalf of the programmer, and the most common are as follows :

1. Illegal use of the extended addressing range.

As the 68000 only has a 24 bit addressing range, sneaky coders sometimes try to use the extra 8 bits for their own nefarious purposes. When these programs run on a 68020, they suddenly start reading and writing memory which exists outside the 24 bit addressing range, with potentially disastrous consequences. Unfortunately, there is little a user can do to persuade such a program to work on a 68020 system, short of using some sort of fall-back mode to a 68000. The SSL A5000 mounts the original 68000 on board to provide such a fall-back, but A1200 owners are stuck.

2. Self modifying code.

Any code which makes changes to itself is liable to fall foul of the internal instruction cache featured in the 68020. For example, some programs – for reasons of speed – will actually poke new instructions into memory and execute them, rather than jump to an entirely new section of code. If the modified code is included in the region which has been stored in the cache, the changes may be undone as the cache is returned to memory. Luckily the user can disable the cache on the 68020, and so some unfriendly programs can be tamed. On the SSL system, a third party program such as SETCPU or the excellent DEGRADER will switch off the cache. A1200 owners have the ever-popular boot up menu.

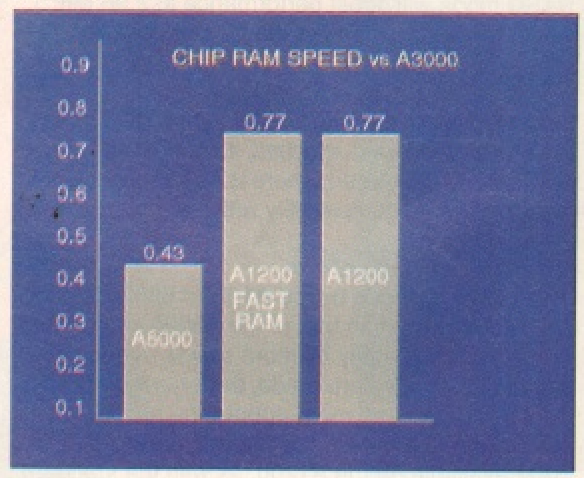
AMIGA SPECIFIC PROBLEMS

If the fact that the CPU varies from Amiga to Amiga wasn't bad enough, there are now several versions of the custom chip set in common use. Although there are three official revisions – original, enhanced (ECS) and advanced (AGA) – there are known to be at least two versions of the original set. Some programs have been known to produce differing results on seemingly identical machines, usually when direct use is made of the sprite or copper hardware.

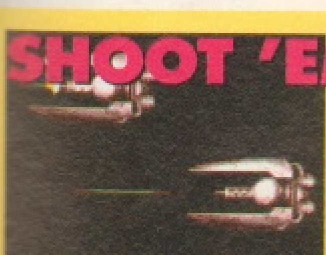
Problems can also occur between differing versions of Kickstart. Some programs will operate with Kickstart 1.2 or 1.3 only, and this means that a ROM changer will be required for owners of A600s and A500Pluses. A1200 owners will have severe problems as their ROMs are 32 bit, but it should be only a matter of time before a (probably legally dubious) software solution hits the PD market.

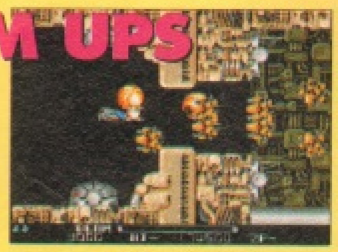
There are as many as 10 subtly different Amigas in use and quite frankly not many commercial games will run on every single one of them. Newer games stand a much better chance of working, as with the ever growing range of processors and operating systems the games programmers have had to tidy-up their bad habits. The future is looking good, but if you have an all-time favourite game which you can't do without some caution is called for when upgrading.

This graph shows how fast the Chip RAM of each machine is, as compared with an Amiga 3000 (25MHz 68030, 32 bit Chip RAM). The A1200 is almost twice as fast as the A500, which is an important factor with graphics.



SHOOT 'EM UPS





PROJECT X

Compatible with A5000: Yes
Compatible with A1200: Yes
Hard drive install: No
Comments: Classic blaster, with unparalleled graphics. A game as good as *Project X* doesn't need any extra speed or graphics. Works on all Amigas, but takes advantage of ECS and extra memory.

R-TYPE II

Compatible with A5000: No – fall back only
Compatible with A1200: No
Hard drive install: No
Comments: Didn't like it anyway. A game which needed speeding up as it's a bit pedestrian at times.

SOCCER SIMS



SENSIBLE SOCCER

Compatible with A5000: Not with an A500Plus.
Compatible with A1200: Yes
Hard drive install: No
Comments: No problems.



MANCHESTER UNITED EUROPE

Compatible with A5000: Yes
Compatible with A1200: Yes
Hard drive install: No
Comments: Recognises CPU, Agnus and memory – what a good example. Pity about the game.

A BOOT UP THE KICKSTART

The A1200 has the all-new, all singing and all dancing Kickstart version 3. As well as being able to run Workbench 3, the Kickstart features a greatly enhanced boot menu. This menu is obtained by holding down both mouse buttons on reset, and features three main options.

1. Boot options
When this menu is selected, a list of all the available boot devices appears. This is useful when you would like to boot from your external floppy drive, or from a floppy drive instead of a hard drive.

More useful from our point of view is the small box marked 'Disable CPU caches'. As mentioned previously, this option will switch off the internal instruction cache available on the 68020 and so fix some games which would otherwise not run.

2. Display options
The new chip set has the ability to emulate the previous versions available on older Amigas. There are therefore three possibilities :

1. Original (for really old games);
2. Enhanced (for A500Plus and A600 era programs); and
3. Best available (for the new AGA modes).

If programs appear to malfunction, for example the sprites are corrupt, this menu may provide a good way of getting the program running.

Also available from this menu is the PAL or NTSC switch. You can also press any key on the keyboard to toggle between these modes. When in NTSC mode, the Amiga is actually running at a different rate – slightly faster, in fact. If your TV or monitor can produce a stable picture, running in NTSC mode will boost performance to 2.96 MIPS, which is 4.83 times faster than a standard Amiga.

3. Expansion Board Diagnostics
This option is really for information only. If you do have extra hardware attached, it will be listed and any irregularities noted. There is nothing you can do here to improve compatibility with older software.

CONCLUSIONS

The power provided by the A1200's 68020 is actually slightly less than that of the A5000 simply because it runs a tiny bit more slowly. When complicated ray traces are made, this shortfall becomes more and more apparent – although it is rarely more than seconds. When there is no Fast RAM available on the A1200, as with the standard machine, this difference starts to become really noticeable – as the performance graphs suggest.

The extra speed provided by the A1200's full 32 bit Chip RAM is very significant, although it is harder to measure accurately. The new Kickstart and 32 bit ROM also add to the effect, and so when running a program such as *Imagine* on two machines side by side, although the rendering times are approximately equal, the window updates and line drawings are a heck of a lot quicker on the A1200.

The ultimate test is with a program such as Grand Prix, running on an un-expanded A1200 against an A5000 equipped Amiga. Which factor makes the most difference: the faster memory and FPU of the A5000, or the faster chip memory of the A1200?

The clear leader was the A5000. I had expected the A1200 to run slightly faster, but there you have it. Of course, when some Fast memory was added to the A1200 in the form of the MBX1200, the trophy changed hands as the A1200 powered ahead.

JARGON BUSTERS

What's 'Jargon Busters'? It's a new feature that'll be appearing on all our reviews for the next few months to help new readers understand some of the more complicated terms and expressions we use when writing about the Amiga. Here's the first such glossary which relates to this lead feature.

● 16/32. Bit As the 68000 CPU is really a 16 bit device at heart, the memory on Amigas which use this processor can only be accessed in two CPU cycles of 16 bits each. When a true 32 bit processor such as the 68020 is used, the memory can be accessed in one go, which is a lot quicker. The A5000 allows 4Mb of memory to be added in this way, but all memory on the A1200 is 32 bits wide – including the Chip RAM.

● CHIP RAM. Chip RAM is the memory which can be accessed by the custom chips which control graphics and sound on the Amiga. As the Chip RAM is shared between these chips and the CPU, it tends to be slower than other varieties. The Amiga 1200 comes with 2Mb of Chip RAM, the Amiga 500Plus/600 with 1Mb.

● CO-PROCESSOR. Any processor added to a system already with a main CPU can be said to be a co-processor. The graphics chips in the Amiga are co-processors, as is an FPU if one is added. A DSP would also be a co-processor.

● CPU. Central processor unit. In an Amiga A500/600/2000 the CPU is a Motorola 68000. In an A1200 or on a SSL A5000 board, the CPU is a 68020. The Amiga 4000 comes with a 68040, and the 3000 with a 68030.

● CUSTOM CHIPS. The special pieces of hardware on the Amiga which control the graphics and sound. Given female names to appeal to love-sick teenagers.

● DSP. Digital Signal Processor. A special co-processor that can be used for all manner of calculations, most notably the processing of digitised sound. The new Atari Falcon has one, so an Amiga option is overdue.

● FAST RAM. Memory which is not accessible by the custom chips is able to run that little bit faster, hence the name. Adding Fast RAM to a Chip RAM-only machine will boost performance, as programs will load into Fast RAM by default. If 32 bit memory is used (as on the SSL A5000 or MBX1200) performance is improved even further, as this memory can be accessed in one CPU cycle rather than two.

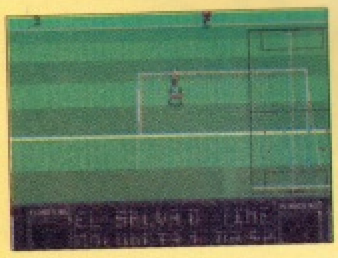
● FPU. A Floating Point Unit, more commonly called a Maths Co-processor. The most common is the 68881 for adding to 68020/30 systems, although this has been superseded by the 68882 which runs about 5% faster and is available in faster versions. The FPU and the CPU need not be clocked at the same speed. The 68040 has an FPU built-in, although it is not complete and requires some extra software to emulate the missing functions.

● MFLOPS. Millions of floating point operations per second – a good measure of the speed of an FPU.

● MIPS. Millions of instructions per second – a measure of the speed of a processor. This measurement can only be taken as a way of comparing CPUs and not systems, as it cannot measure the speed of – for example – the Workbench, which depends heavily on the Amiga's custom chips.

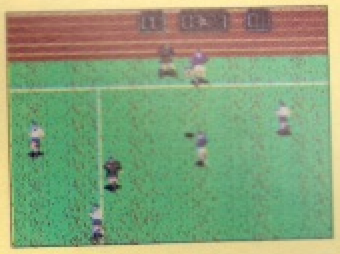
● RAY TRACING. The generation of realistic pictures by using programs which model the laws of physics. A very good test of the power of the processing system, but not so hot at measuring the speed of any graphical operations, which use the custom chips.

● ROM SHADOWING. Some accelerator boards allow a copy of the system ROM to be made in the 32 bit Fast RAM. This will speed up programs, as they will be able to access the sub-routine a lot faster.



STRIKER

Compatible with A5000: Yes
Compatible with A1200: Yes
Hard drive install: No
Comments: Works fine, but no speed up.



EUROPEAN CHAMPIONSHIP 1992

Compatible with A5000: Yes
Compatible with A1200: Yes
Hard drive install: No
Comments: Works fine. No worthwhile speed-up.

FLIGHT SIMS



FLIGHT OF THE INTRUDER

Compatible with A5000: Yes
Compatible with A1200: Yes
Hard drive install: Manual says yes, but it's lying.
Comments: Like a good flight sim should be, everything gets faster, smoother and a great deal more enjoyable.



AV-8B HARRIER ASSAULT

Compatible with A5000: Yes
Compatible with A1200: Yes
Hard drive install: Yes
Comments: If it says '68020 recommended' you know something's up – and it needs to be for everything is so slooow on a basic machine, but when it's on the A1200 everything is silky smooth. Well worth a look.

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TROLLS
FLAIR SOFTWARE



Quite why Trolls are so popular escapes me. They're little better than My Little Ponies with their dayglo hair and impish expressions. If ever a doll had been designed to appeal to the under tens, then this is it. That still doesn't let off the legions of parents who have bowed to their young brat's demands and bought them one of the plastic pug-uglies. So many have forked out for one of the Trolls (which come in all shapes and sizes, costumes and hair colours), that they were the number two selling toy this year (behind the Super NES – boo, hiss!).

So now, predictably, a software company has snapped up the rights to the little critters and based an entire game around their exploits. Arriving just too late for a full review, we thought we'd give you a taster of what to expect. Trolls is a multi-level affair with 35 main levels plus a further 20 bonus-type stages. Taking control of a particularly ugly looking troll, with the ubiquitous purple hair, you have to guide your on-screen ugly through seven themed worlds. These include Media Land, made up of set-squares, newspapers, bionic rubbers, killer letters and all sorts of other malarkey. The other six are made up of Toyland (which has probably appeared in more games than I care to remember), Cherry Soda Land, Board Game Land, Candy Land, Fairground Land and Fantasy Land – the names will give you a good idea of what to expect.

It's all very slickly put together, with our hero able to despatch the nasties by bouncing up and down on their bonces. Each level sets our nameless Troll a specific number of baby trolls to rescue who are scattered about the platforms awaiting your attention. There are various special powers also littered around each level, and these include such things as speed boots to make your character go faster, a shield for invincibility and a pair of springy shoes to help you jump twice as far as normal. Each level is selected by entering one of a series of doorways, very much like *Robocod*, and even the graphics and tunes are reminiscent of Millennium's top-seller. There's lots of visual gags included in the game, to add even more fun to the proceedings, and if things get too tough there's also a magic Yo-yo which can be used to break down walls and swing about the platforms.



All in all, it's promising if very derivative stuff, and we'll have a full review next issue.

IMPRESSIONS

THE MAN WITH THE STICK
CORE DESIGN

Core Design's latest and weirdest title is only in the very earliest stages of production, but already it looks highly promising. A young nerdy Zoo-keeper by the name of Elvis has been kidnapped by aliens who want to put him in a space-zoo... as an exhibit! Needless to say he escapes, but finds himself alone on an alien planet with no feasible way home. Well, not completely alone. His travelling companion is a small thin alien, shaped exactly like a stick, and the two of them have to battle other weird aliens and use all their skills to free themselves.



Apparently, the idea behind this game came after a meeting in which a game draft was devised along the lines of a barbarian doing all sorts of barbarian things with a staff or a sword. After an evening with a sketch pad, it soon digressed into *Man With The Stick*, something entirely different. We'll have a full work in progress in a couple of months.

DONG!
DMI

The heading of the press release that accompanied the demo disks for this game issued a challenge to Team 17 – boy, talk about sticking your head on the chopping block! This is especially true when you consider that *Dong!* is the first entry into the world of full price commercial software for the coding team, The Hidden. Fortunately for them, it looks good.

Dong! is a mutant Samurai duck. This might seem like an odd creature to have around these days, but the game is based in the future, where ducks have evolved far beyond their present state. This particular duck has spent many years studying every known martial art and has combined them all into one powerful move, and with this move Dong! is ready to take on the Big Bad Dick (!?!), and hopefully save the universe by collecting power crystals

Covering over 2000 screens, all scrolling at 50 frames per second with over 60 different types of monster to kill and maim, at the moment it's very playable and very addictive.

As Dong! lands on and kills the enemies, some will drop eggs which he can collect. By ducking down (which involves crouching, and then turning into a duck) he lays and hatches the egg, which then gives him a special weapon. This could be an eggshell which acts as a shield but slows him down a little, a stronger pair of legs allowing him to jump much higher, or all manner of weird and wonderful weapons which haven't been implemented yet. Yes, it's all done in a highly comical way, and just adds to the fun!

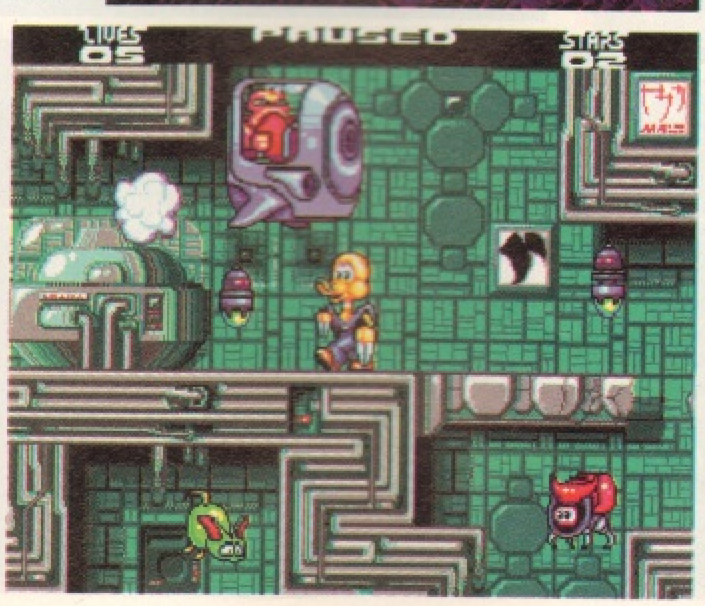
The key selling point behind this game, however, has to be the price. Selling at only £15.99, it looks like it'll still be one of the best platformers we've seen in a long while, even if it's a tenner less than most other games in its field.

The proof, as always, is in the reviewing, and we should have a full review next issue. In the meantime, take it from us, it's looking brilliant.









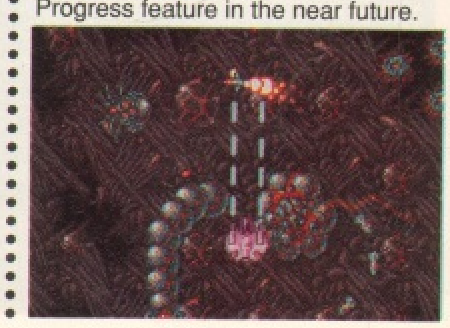
BLASTAR
CORE DESIGN

Shoot 'em ups are nowhere near as thick on the ground as they used to, a problem that Core Design are trying to rectify with *Blastar*, an original 360 degree scroller.

At the moment, the game has been in production for a couple of months, but is already looking quite spectacular. The sprites are big, and the 16 screens by 16 screens playing areas are even bigger. The aim is to blast away everything else before anything blasts you, using every available power up and bonus.

Final plans for the game have yet to be drawn up, but it looks like the game will contain a 'Shop Ship', like the weapons van in the classic *Spy Hunter*, which players will have to fly into to collect some better weaponry.

I'd love to tell you how fast, smooth and playable it is, but being as it only consists of *Deluxe Paint* screens, I can't. But it does look good. Look out for a Work In Progress feature in the near future.



CHUCK 2
SON OF CHUCK

It's true! Our caveman hero has had a son! Tony Dillon gives you the digital equivalent of an ultra-sound scan.





Just like the movies – any game worth its salt starts out like this. The storyboard is used to plan the opening sequence of the game to give it a more cinematic feel.



Top: Looks like Junior has just been walloped. Look at those tonsils. *Left*: *DPaint* sprite shots give the animators something to work from

UNGABUNGA!

Chuck Rock, one of Core's earliest games, has also been one of their best sellers. Originally released on the Amiga, the prehistoric platformer has subsequently made a huge impact on the console market. Now he's in the middle of spawning an offspring, and despite a couple of difficulties here and there, it's a relatively painless pregnancy.

POOR JOKES

The story goes like this: The lovely Ophelia has been rescued and Chuck has put together an extremely successful car company, under the banner of Fjord Motors (groan!). Ophelia has also announced that she is to have a child. Things just get nicer and nicer. But there is a dark spot on the horizon. Brick Jagger (ouch!), director of rival company Datstone (someone lock the product manager up!) wants Chuck's success, and so by way of intervention, he kidnaps him. After all, without a boss, a company can't function. Chuck Junior isn't too happy about this, so sets out to rescue dad and make the world a better place. Ah, bless him!

At the moment, the game is being pieced together in Core's Derby headquarters by the valiant team of coder Dan Scott, graphic artist Richard Morton and long time designer Bob Churchill. At the time of writing, only level one was complete, but already some marked changes are evident.

SUB GAMES

On top of the five main levels, there are four different sub-games to keep you entertained. These come between the main levels and, at the time of writing, these haven't been written yet. What we have got, though, is an idea of what they'll contain.

1) Apple Tree

You are positioned in front of a single apple tree, with its branches full of apples. The idea is to knock as many apples out of the tree as possible within a given time limit using only your club and a small dinosaur that runs around the bottom of the screen. The dinosaur will work as a trampoline, so when you jump on it, you'll be able to reach the higher branches.

2) River Race

A joystick waggler, this one. Junior is sat in an upturned turtle, which has to be paddled furiously along the river to get you over the finish line before anyone else does.

3) Statue Carving

This game is based on the car-smashing bonus stage in the arcade version of *Street Fighter 2*. In front of you is a large slab of concrete, which you have to fashion into a statue of your beloved dad before time runs out. Carving was primitive in those days remember, so the only tool you have is your trusty club.

4) Dinosaur And Cart

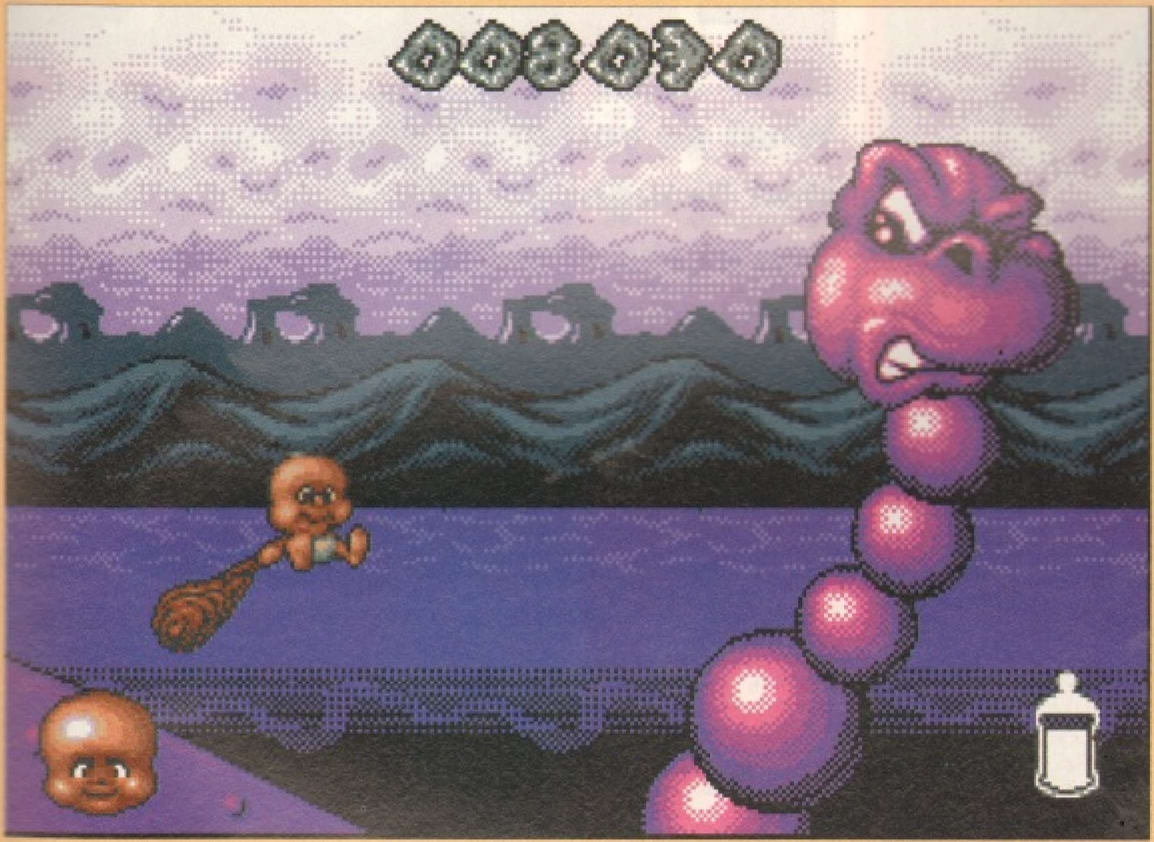
This scrolling game has Junior travelling between the fourth level, the Cliff and the fifth level, the Car Plant, in a cart pulled by a speedy dinosaur. Enemy dinosaurs attack all the time, and all Junior has to do is survive to the end of the course to complete the stage.



Cartoon-like sprite shots of some of the characters set to appear in the final game. As you can see, no detail has been spared.

INT(R)O THE GAME!

As always with Core products, meticulous care and attention is being paid to the intro. Work has yet to commence on the actual animation for *Son Of Chuck*, but if the storyboard is anything to go by, it'll be their best yet. It all begins with some black and white snapshots of Chuck's victory over Gary Gritter from the end of the last game, the booming success of Fjord and the arrival of Junior via the stork. Then you get an animation of Chuck in his office, Brick Jagger enters with a gun, Chuck is bundled into a van and driven off. Next scene is at Chuck's home, where his wife learns the news of his kidnap. Junior breaks out of his play pen, mutters 'I'll be back' and is gone. Where do they get their ideas from?



Major hazards will have to be passed at various stages of the game. If Junior gets hit by energy sapping bolts, his energy bar will obviously decrease. Instead of some boring rectangle to represent this, Core have gone for a baby's bottle – one of the little touches that is sure to set the game apart from other platformers.







The first thing that will probably strike you, and no doubt already has if you've cast your eye around the screen shots on this page, are the stunning visuals. Although Richard was the artist behind the original, just a glance here will show you that *Chuck 2* is no ordinary sequel. There are more colours on screen, thanks to an expanded number of playfields and there are even more levels of parallax than before.

CUTE

What you can't see here is the stunning animation. Chuck Junior is only little, so he has to drag his club behind him. When you walk up a ramp, the club is lower than you and vice versa, which creates a superb effect. And as for the way Junior cries when he is hit by a nasty, you just want to pick him up and cuddle him! [*Yes, we've heard about people like you! – Ed.*]

Probably the biggest change between this and the original are the way the levels have been designed. Rather than the simple left to right scrolling of the first, *Son Of Chuck* features some weird and wonderful levels that only a tortured soul could have come up with. One level is a four-screen long dinosaur, and rather than let you walk freely along it, the scrolling only moves forward once you have dispatched everything on screen. In another vein, the cliff face level is only about two screens wide, but extends upwards for another 30.

PUZZLES

Core are keen to steer *Chuck 2* away from being just another scrolling platform game, and have made sure that there is a variety of gaming styles to keep everyone happy. There will be a fair bit of puzzling involved – deciding where to knock rocks, choosing routes over particular traps, etc. In many cases there are only one or two solutions, so the player has to keep their wits about them at all times.

But what will set this game apart from the millions of other scrolling platform games that are currently appearing? 'Little things,' says designer Bob. 'All the little things that make people sit back and say, look at that. Anyone can write a playable game, it really isn't that hard. It's much harder to make a game interesting, to come up with all the little touches, like the way Junior drags his club, or all the tiny animations we're going to throw in.' With other firm platform successes under their belt, we can expect a lot from Core.

At the moment, *Chuck 2* looks both playable and interesting, but you're going to have to wait to see for yourself. It's only been in production for the past four months, and Core are guessing that it'll take at least another two before the project reaches completion. When it does, though, we'll be the first to let you know as we've got a playable demo lined up for later in the year.

GOING CLUBBING

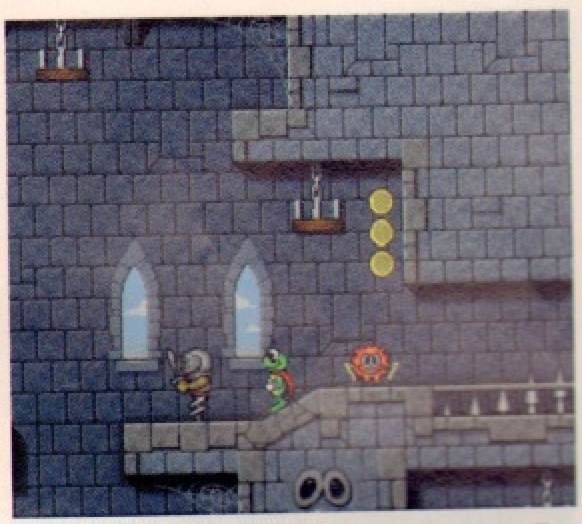
Despite his small size, Chuck Junior is a wizard with a club, managing to get all sorts of uses out of it. Dan, Richard and Bob have come up with a main character that's in keeping with the original title, but still acts and looks like a baby. So, Junior drags his club rather than carries it. He isn't tall enough to step over long grass, so for a lot of the time all that's visible of him is his head.

His club is where all the action is, however. He can swing it upwards, knocking things out of the sky (or birds off telegraph wires), he can do the obvious culling left, right and centre and leap all over the place, but one of the most useful features of this versatile block of wood is as a ladder. He's only a little chap, and sometimes when boulders and the like roll towards him, he just can't jump over them, so he climbs up onto his club and balances on top until the trouble passes.

SUPER FROG



What do you get if you cross the team that brought you *Project X*, a small pub in Huntingdon and an idea that came about through alcohol? Tony Dillon finds out.



The castle level contains all sorts of reflex-testing puzzles, like the spikes on the right which rise and fall in sequence.

HIGH STANDARDS

Team 17 really do seem to have set their sights high since their birth a couple of years back. In the words of director Martyn Brown, 'We want every product we release to be the best of its type.' Hence *Project X*, one of the best shoot 'em ups the Amiga has ever seen and *Body Blows*, a game that already looks set to snatch the crown from *Street Fighter 2*. I've come to spend a day in a Cambridgeshire pub not to drink all day, despite the close proximity to Christmas (when this preview was written), but to take a good look at their latest and greatest – *Super Frog*.

Cute platform games are really ten a penny as far as the Amiga scene goes. We've had Millennium's *Robocod* and Gremlin's *Zool* – Ninja From The Nth Dimension. It goes without saying that these two games alone have set extremely high standards in their own genre. Will *Super Frog* really be able to match up?

Super Frog is at present a game with no storyline and lots of gameplay. Why? 'When we come up with a game, the plot is the last thing we do.', explains Martyn. Basically, as the project is written, we keep coming up with new ideas and little bits to bolt on. *Super Frog* has changed a lot since we started on it in early April, and we've got loads more ideas.'

SOUNDS LIKE THE CHIPMUNKS

At the moment, there are only one or two spot sound effects within the game, as the sound is one of the things being tackled last. Alistair Brimble is the man handling that side of things, and as there is 130k free for sound effects, it should sound fairly incredible. One idea currently under consideration is copious amounts of speech, sampled at a very low rate and then played back at a high one, to give *Super Frog* a chipmunk voice. Should be interesting.

SUPER FROG 2?

'*Super Frog 2* on the A1200 is going to be amazing!', enthuses coder Andreas Tadic, but that's another story. First things first, what is *Super Frog*? Well, as you might have already guessed from the screenshots, it's a platform game. Surprisingly, it isn't a *Sonic* clone, nor does it have much in common with *Mario*. It is, however, looking like it's going to blow *Robocod* and *Zool* right out of the water.

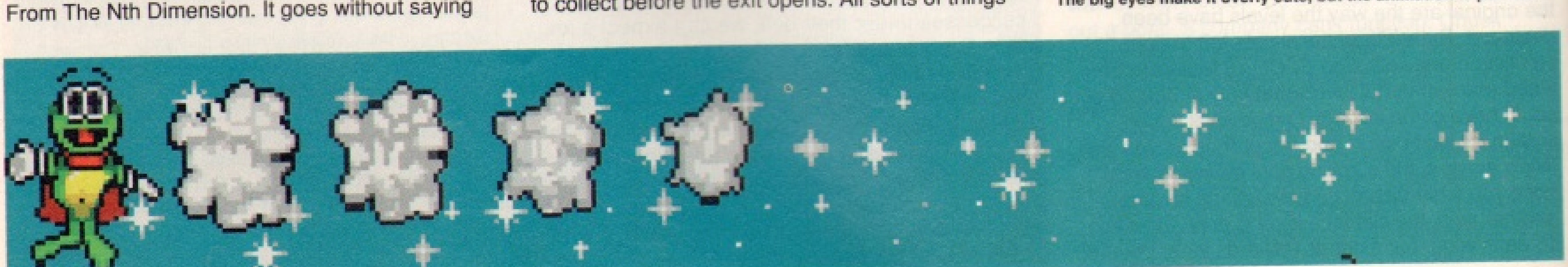
At present, the aim is to travel around each of the huge levels collecting coins. A counter in the corner of the screen tells you how many you have to collect before the exit opens. All sorts of things are pitched against you, from lava pits to carnivorous Ladybirds. By way of attack you can either shoot them, or just jump on them. Remember, *Super Frog* is a super hero, and as such is capable of flight. Well, sort of. If he leaps into the air, repeated stabs of the fire button slow his fall considerably, allowing him to make some impressively long jumps. Needless to say, most of the puzzle spots have been written with this in mind.

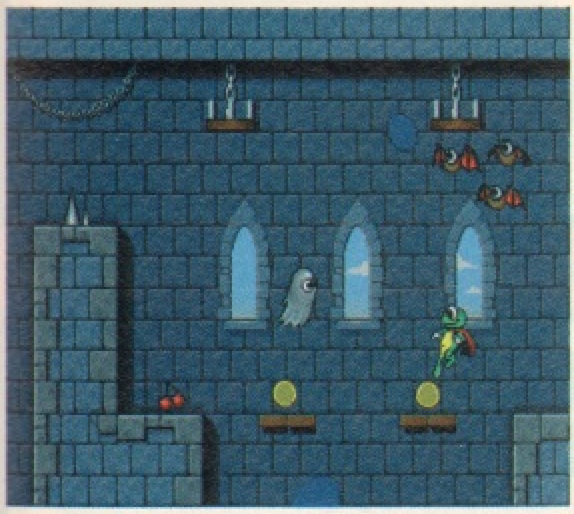
VERY, VERY FAST

The most impressive thing about it at this stage is the speed. *Super Frog* is incredibly fast, with full 360 degree 50Hz scrolling. But lots of games have had that, and have all suffered from the same problem – the dreaded 'slowing down' when the machine tries to move too much at once. How is Andreas dealing with this? 'The system I've written



The ladybird sprite has to be one of my favourites in this game. The big eyes make it overly cute, but the animation is perfect.

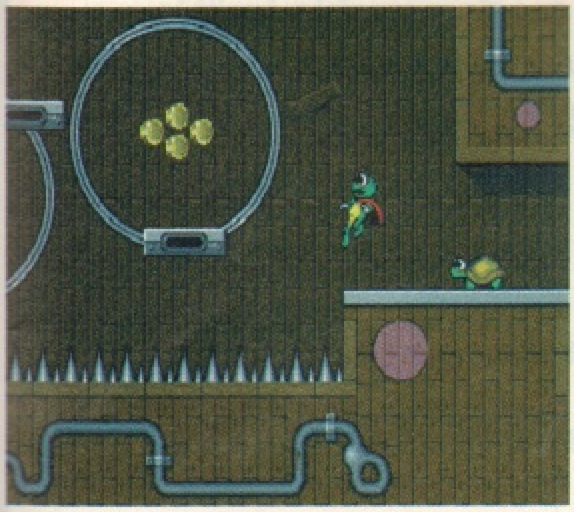




No platform game would be complete without platforms that disintegrate as soon as you step on them, and *Super Frog* is no exception. Those coins have to be collected, but you have to be pixel perfect if you're going to get both first time. If that isn't hard enough for you, there are a few indestructable spooks floating about too!



Level 1 – the forest. This is where you really have to get to grips with the controls - and fast! The mad bomber bombs incescently, the flowers spit fireballs (don't they always?) and the small blue creatures hide some of the most vicious snarling beasts known to man. At least the tree looks friendly!



Team 17 aren't ashamed of their influences, and are open about the fact that a lot of their ideas come from other games. Here we see the 'platforms on tracks' idea implemented in the *Super Mario* series of Nintendo games, whereby you have to cross a large pit laden with spikes by way of leaping between moving platforms. With the whole game running at 50 MHz, some fairly fast moving is going to be required.

means that despite what's on screen, the scrolling and the main character will always update at 50Hz. Other bobs will slow down at times, but the scrolling will remain constant, so it won't feel like it's slowing down.' A good move, I'm sure you'll agree.

In terms of bells and whistles, *Super Frog* has a couple of tricks. Although, within the main game there's little new – bonus objects, secret rooms, etc. the game has some new ideas. At the end of each level, you get to play on a fruit machine, using coins you've collected on your way through the level. But not any ordinary fruit machine. Yes, there are coins, points and lives to be earnt here, as you would expect, but the ultimate prize is the 'Level Lock'. This handy little utility changes the internal start position to the level you are about to enter. That way, every time you play, you'll start from the new level rather than the start – vital with a game this size.

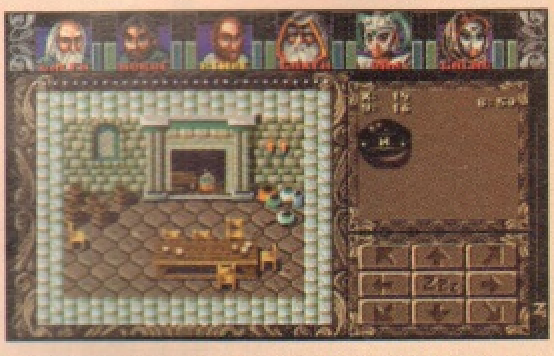
At the moment, *Super Frog* looks and plays superbly, and I for one can't wait to see how it'll be when it appears on our shelves in the next couple of months. In the meantime, look out for a playable demo on our March issue when we'll also have a full review.



Ever wondered how your favourite games are pieced together? Here are the tiles for the level one backdrop. Once drawn, these tiles are pieced together jigsaw fashion to build up the background. It might seem long winded, but by using this system, coders can fit much larger maps into smaller spaces. If you think that a standard 320 x 256, 32 colour screen is around 64K, a screen made up of tiles would come in at around 6K! One hell of a saving, even if the map at the moment doesn't make a lot of sense to you and I!

AMBERMOON

Our resident RPG expert Tony Gill popped across the pond to see how Thalion's sequel to the average *Amberstar* is shaping up.



More familiar territory this time with the traditional top-down view. As in *Amberstar*, the walls and doors all disappear when your party move around the buildings, which means that you often can't see the various monsters until they're virtually on top of you.



Although the 3D dungeon graphics are still being worked on, this early shot shows just how they're shaping up. Obviously static screenshots can't show exactly how fast this section is currently running so you'll just have to take our word for it – it's very fast !



More ease of use in action here. To open the chest, just simply click on it and the action is performed – even the Format boys could get the hang of it immediately. Well, on second thoughts...

SO WHAT'S NEW, THEN?

When Thalion released *Amberstar* earlier in the year it didn't exactly set the RPG world on fire. Competent as it was, the game never really introduced any fresh ideas and, as such, received only a lukewarm reception from the computer press. The German coders now look set to silence all the critics with *Ambermoon*, an adventure which will, they hope, knock Legends of Valour off its King of the Genre Throne.

The major (and most noticeable) improvement over the first 'Amber' game is the new dungeon section. In the original RPG the player was faced with the standard blocky 3D views that moved in giant steps as the player selected the direction he wished to travel. Whilst many of the recent adventures employ this technique, it has to be one of the most unrealistic and unconvincing methods of conveying the on-screen action and, let's face it, apart from a few graphical enhancements here and there, not a great deal has changed since this 'maze view' first appeared in *3D Monster Maze* on the ZX81 (remember them?). Developments in the PC world have, so far, outstripped those that we have seen on the Amiga. However, with the advent of texture mapping in the new RPGs we are starting to catch up.

USER-FRIENDLY

Ambermoon's new system, is very user-friendly and realistic. The whole texture-mapped dungeon moves in real time and the player has a greater degree of control over his character's movements. This whole section can be compared to *Legends of Valour*, and if you thought that was fast just wait until you see *Ambermoon* shift! Thalion are also including full accelerator support to cater for the real speed freaks.

The player interface has been completely redesigned and is now one of the most user-friendly systems yet to appear in an RPG. There's no longer any cumbersome icon clicking – if you want to pick up an object then simply depress the mouse button over the item and it is removed from the location. Swapping items between the various characters is just as easy and the whole game is far more accessible because of this. If you remove objects from the inventory and drop them in the dungeon, the game will remember exactly where every item is, so it is possible to create stockpiles of goodies for you to return to later.

WORLDLY WISE

There are a number of different worlds in *Ambermoon* but at the moment Thalion aren't disclosing the exact amount as it has yet to be finalised. Each world will have its own graphical style, ranging from the standard Olde Village setting to the more bizarre alien globes. When exploring these worlds, the screen changes to a more traditional top-down view so that players can see exactly where the areas of interest are. The size of the world maps have been vastly improved over the original game and currently stand at a massive 800 by 800 squares. The more mathematically able among you will have realised that that's 640,000 possible locations – and that's not counting the 3D dungeon section!

GRAPHICS MAPPED

The graphics of the map have also been given lots of loving treatment and all the characters and scenery are drawn exactly to scale, ensuring that the player never appears larger than a mountain, something that *Amberstar* was guilty of. *Ambermoon* is scheduled for release this May and by the time it has been completed the game will have taken five years of 'man time' to produce. Judging by what we've soon so far, it looks like time well spent!

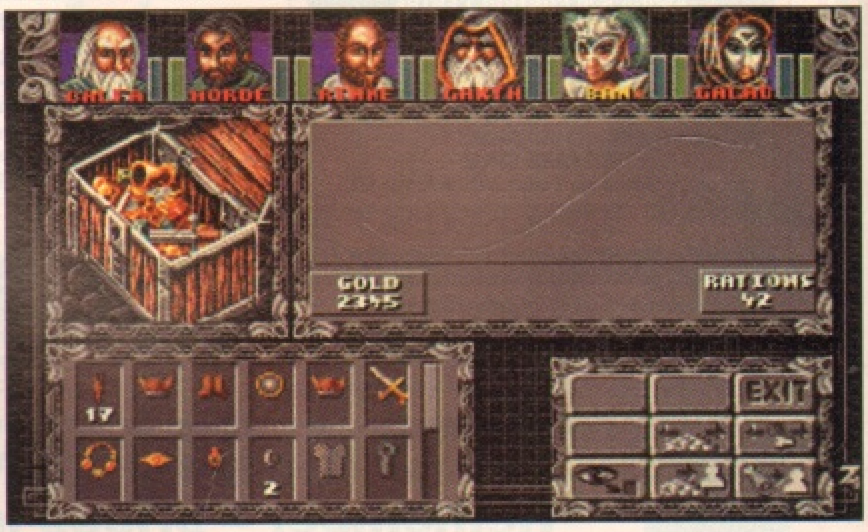
TEXTURE WHATTING?

Texture-mapping is a clever system which takes a standard 2D graphic and, using some nifty mathematics and some other complicated routines that even I can't quite get my head round, 'paints' it onto a 3D dimensional polygon shape. All of the grainy dungeon walls are stored in memory in various pieces (much like a jigsaw puzzle) and pasted together over the flat walls to give the impression of a solid, realistic obstacle.

The pioneering system used by *Ambermoon* was stumbled upon by Michael Bittner, one of Thalion's top boys, whilst he was beavering away on the closing stages of Amberstar. Rather than scrap all the earlier work and hastily implement the 3D section into the original game, the German software house decided that this discovery alone warranted a full-blown sequel.



Experienced *Amberstar* players may be more than a little surprised to see locations like this popping up from time to time. You'll have to make sure you've packed your bucket and spade before setting foot on this planet.

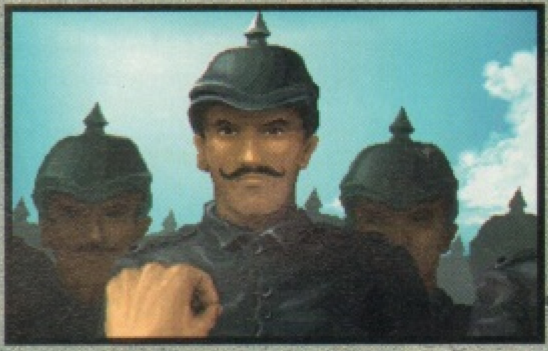


Unfortunately you'll not be able to carry everything you come across in *Ambermoon* due to the weight restrictions that the characters have so it might be a good idea to create a few stockpiles around the place.

HISTORYLINE

1914-1918





HISTORYLINE 1914-1918 is a strategy war game simulation set in the period of the first world war.
One or two players are able to take control of opposing forces. Choose to take the role of either the Allies or the German-Austro-Hungarian army. From your aerial view, witness the battle as you deploy and then the enemy counters.
Changing seasons, varying quality of terrain, strategically held locations, and well planned attacks by outmanoeuvring your opponent are all critical considerations to be met in order to achieve victory.
HISTORYLINE 1914-1918 contains a wealth of historical and technical information. This is not only illustrated beautifully on the screen during the course of the game, but is also available for your reference in the extensive and meticulously researched manual.
Making it easy to learn and to play, HISTORYLINE 1914-1918 is a must for everyone interested in an extremely high quality, massively challenging, addictive, and hugely accurate strategy war game simulation.
Hours of enjoyment - *Guaranteed.* You may even learn something!











Screen shots show MS-DOS VGA version. MS-DOS version supports Adlib, Soundblaster, and VGA 256 colour mode graphics. Amiga version supports accelerator boards and 64 colour mode graphics.

Designed and developed by the same team who created Battle Isle.
For further information please telephone 0727-868005

Blue Byte

Blue Byte / Play Byte
Aktienstraße 62
4330 Mülheim-Ruhr
Germany



Cyberdreams invite you to journey into the unknown in their scary new adventure. Dan Slingsby puts on his industrial strength underpants and gets lost on the way.

You'll begin to realise that things aren't quite what they seem when this baby doll delivered to your house transforms into a grotesque alien demon.

DARKSEED

ALIEN ATMOSPHERE

Forget the throwaway one-liners of graphic adventures such as Lucasfilms' *Monkey Island* series or the exotic tomfoolery of Westwood's *Legend of Kyrandia*. The new adventure from U.S. outfit, Cyberdreams, is an altogether more sinister affair. Although it's not without its visual gags and flippant wordplay, most of *Darkseed* is embued with a dark and menacing atmosphere, a situation which is reinforced by using the gruesome straight- from-your- worst-nightmare artwork of H.R. Giger. In case the name sounds familiar, that's because Giger was the inspiration and design guru behind the stunning first Alien movie, creating both the atmospheric sets and the acid-slavering xenomorph itself, so if you've seen the movie you'll definitely know what to expect here...

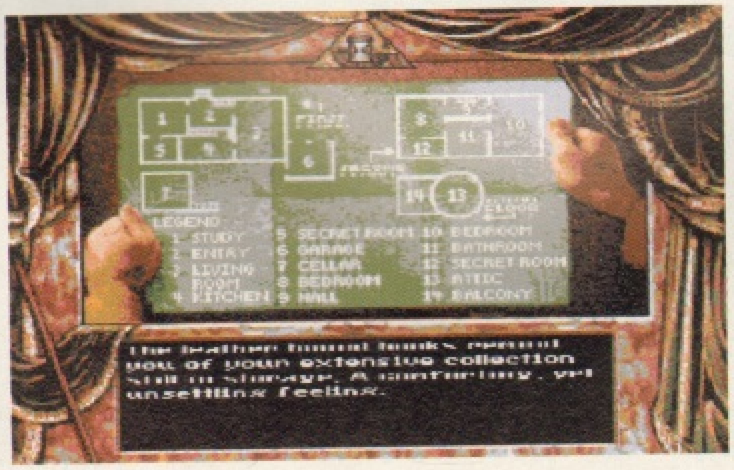
In case you missed our preview of the game a couple of months ago, *Darkseed* is an out-and-out sci-fi adventure. As such, it's a terribly bleak affair, with a very uncheery and depressing scenario. The game begins with an animated intro depicting your on-screen alter ego, Mike Dawson, having a rather vivid nightmare in which aliens implant an embryo in his brain. The upshot of all this is that Mike not only has a headache from hell when he awakes from his nightmare, but that he also has approximately three days to get rid of the embryo before it emerges, Alien-style, from the insides of his brain.

Apparently, the house Mike has just bought (which resembles something straight out of the Addams Family or Psycho) is an intergalactic transdimensional thingammy which is at the centre of a sinister alien plan to invade the Earth. To save the day, it's up to Mike (and, indeed, yourself) to find the cure for his gargantuan hangover, discover and destroy the interplanetery portal wotsit and thus avert the threat of alien invasion forever. Hurrah!

HEADACHE FROM HELL

Of course, the most obvious thing to do when you've got a headache is to take some asprin, so each morning Mike has to be guided to the bathroom to stuff his face full of headache tablets. He also has to take a shower – a reflection on American hygene standards, maybe, or the fact that Mike appears to sleep in his clothes at the end of each day's adventuring! Failure to do either of these will result in the premature ending of the game. Once refreshed, it's down to the business of solving the game's puzzles and slowly piecing together what the hell's going on. Mike doesn't immediately know he's been impregnated with an alien embryo, but he'll soon discover the incredible truth and from there on in it's a race against time to find a cure before his head explodes in an eruption of blood and sinewy flesh.

Most of the game's puzzles are fairly logical, and require you to do or fetch 'A' in order to solve, move, or find 'B'. For instance, a locked chest requires you to find the crowbar in the garage before you can open it, and you'll need to get a library card before you can go to the library and receive an important message hidden in a book.



Once you've found the blueprints to the house, you'll also be able to access the hidden rooms.

Many puzzles, however, are time/event sensitive, which can leave you hanging around for a while with nothing to do. You've either got to allow some time to pass before you can get something done or be in the right place at the right time. For instance, on the second day you must collect the package from the postman or else you'll be unable to enter the aliens' universe through the cracked mirror. The package contains the missing splinter from the mirror, so if you miss the postie when he rings the bell, that's it. He won't leave it on the doorstep for you to collect later on! Other avenues of exploration are also opened up once a prerequisite action/event has taken place – for example, the house's secret rooms can only be accessed once you've discovered the house's blueprints. Even if you know where the hidden doorways are, you won't be able to open them until you've found the plans.

Because of this, it's important to save your game position on a regular basis. There's a lot to miss as you explore your new home and the little town of Woodland Hills. And once you've crossed over into the Gigeresque alien world, there's even more to find and discover. In all, more than 75 locations have been crammed into the game and although some are



To get rid of that headache from hell, you'll need to go to the bathroom and overdose on Asprin. If you don't, you'll soon suffer the consequences and your splitting headache will take on far more deadly overtones.



Once on the balcony, tie the rope you've just found around one of the gargoyles and use it as an emergency escape route. You'll also find this creates a handy exit once in the alien dimension later on in the game.



If at first you don't succeed, try and try again. You won't always get the result you want at your first attempt. That jacket you've just searched contains a vital clue, which you won't find on your first look, so have a second peek to see what you've missed.

Do not adjust your set... Once you've found the motor, turn on the radio to hear some decidedly weird noises from another dimension.



There's nothing like a bit of grave-robbing, that's what I say. If you want to become a latterday Burke and Hare, grab a spade and get digging. Be careful, though, as the local town folk don't take to kindly to you unearthing their deceased relatives.





The small town of Woodland Hills is populated with a diverse collection of lively (and not so lively) souls. Among them is the librarian – as with most of the characters in the game, she can give you some vital info to help you succeed in your mission.

merely decorative fillers, most contain important clues or equipment to allow you to progress further into the adventure. Slip up just once, and you'll condemn Mike to an untimely and very unsavoury death – the failed game sequence has the alien erupting from Mike's forehead in true Alien fashion.

MIRROR IMAGE

The alien world is, in fact, a mirror image of the exisiting world. Most of the rooms in Mike's house have a corresponding room in the alien environment, and many of the objects that are found in the real world can also be located in the alien dimension. This is handy for finding your way about and adds a neat twist to the unfolding events. For instance, early on in the game Mike meets up with a character called Delbert who is busy playing fetch with Fido, his dog. After a while Delbert and the dog take their leave, but forget the stick. This is obviously an invitation to pick up the stick and add it to your growing inventory. Later on, once you've crossed over into the alien dimension, you'll encounter Dark Fido, the bridge guardian who is blocking your way. Now, if you simply throw the stick you picked up earlier into the abyss, the alien dog will leap after it, never to be seen again.

There are many other examples of the alien world mirroring events in the 'real' world. Probably the neatest is when you're arrested by the local police for grave robbing. By secreting supplies under the pillow of your prison bunk it's possible to access them when you've been put into the alien gaol. It's this kind of logic and prompting that makes *Darkseed* such an interesting game to play – things might not be immediately obvious, but once you've sussed them out, you'll wonder why you didn't think about it in the first place. Unfortunately, Cyberdreams reckon us Brits are a bit on the thick side when it comes to adventuring or why else would they include a complete solution with the game as a limited promotion? Try as I might, I couldn't resist consulting it while I was playing the game.

The control method also deserves some praise. Everything in the game is mouse controlled via an on-screen pointer. By clicking on the right mouse button this pointer can be changed from a use icon to a move or examine cursor. Then, by clicking the left mouse button the selected action can be carried out. This soon becomes second nature, and such an uncomplicated interface (complemented by a pull-down inventory menu) makes for a much more accessible and straightforward game. The examine option presents a question mark on-screen which changes to an exclamation mark once something interesting is close by. This makes important objects easy to locate and superfluous detail can be ignored. Similarly, the use-mode is signified by an open hand. When this changes to a pointing hand, it means the object that you're touching can be either picked up or used for some specific purpose.



This reminds me of how I usually feel on a Monday morning.

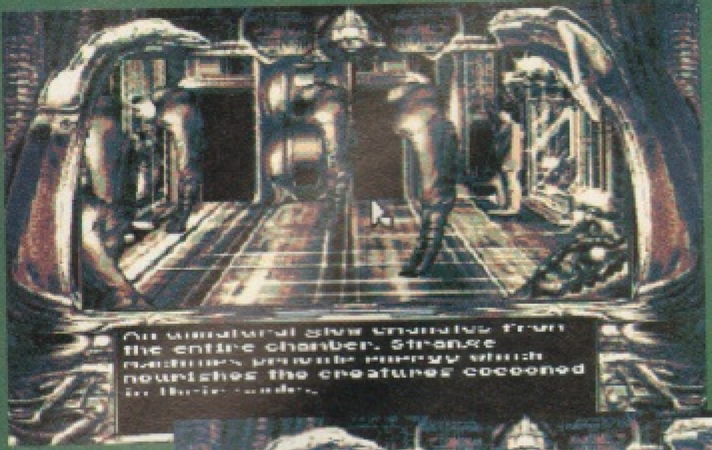
Unfortunately, *Darkseed* is probably a little too serious for its own good. In fact, at times it's downright depressing! A lighter touch and a few more laughs would have helped things along enormously. Admittedly, there are a few humourous touches, such as the Get Out of Jail Free card that Delbert gives to Mike, or the incidental background animation, such as a dog peeing against a fire hydrant. Unfortunately, these are few and far between, and the unrelenting doom and gloom can be off-putting. For someone raised on *Monkey Island*-type adventures, I found *Darkseed* to be a right turn-off at times, because of its inherent seriousness and poe-faced sensibilities. Try as I might, I couldn't get Mike to overdose on the bottle of asprins in the bathroom – I suspect this was a case of Cyberdreams worrying too much about what concerned parents might think.

WHO THE HELL DO CYBERDREAMS THINK THEY ARE?

Almost two years in the making, *Darkseed* is the first game from fledgling software company, Cyberdreams. Initially released on the PC during the first half of '92, the Amiga version of *Darkseed* represents the first in many such games scheduled to appear over the next two years (at the very least).

The driving force behind the American-based company is Patrick Ketchum, a veteran of the computer software industry. In 1980, he founded Datasoft Inc. and helped launch such blockbuster games as *Pac Man*, *Dig Dog*, *Zaxxon*, *Pole Position* and *Bruce Lee* among many others. By the mid-80s, he found himself at Sullivan Bluth Interactive where he was directly responsible for the *Dragon's Lair* and *Space Ace* series of games. With such a pedigree behind him, it's little wonder that Patrick is expecting big things from his new company. Cyberdreams claim to have invested more than $600,000 in *Darkseed*, a large proportion being soaked up by the big-name endorsement of H.R. Giger and the rest of the company's impressive roster of creative personnel.

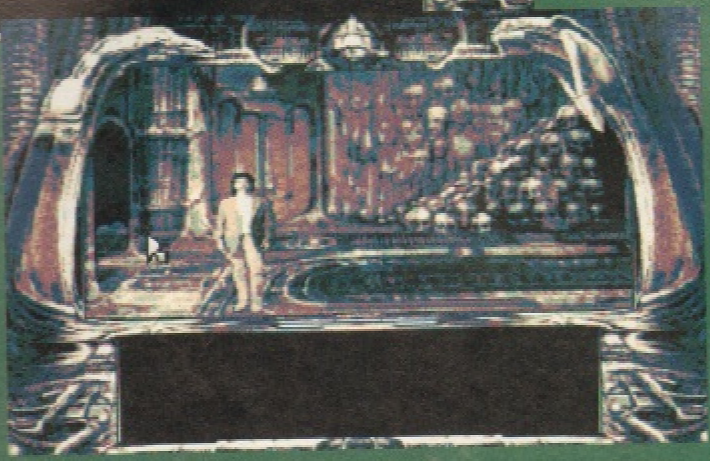
Aiming to release two games a year from now on, the company intend to concentrate on the horror/sci-fi genres. To this end, they're committed to using the best creative talent money can buy.



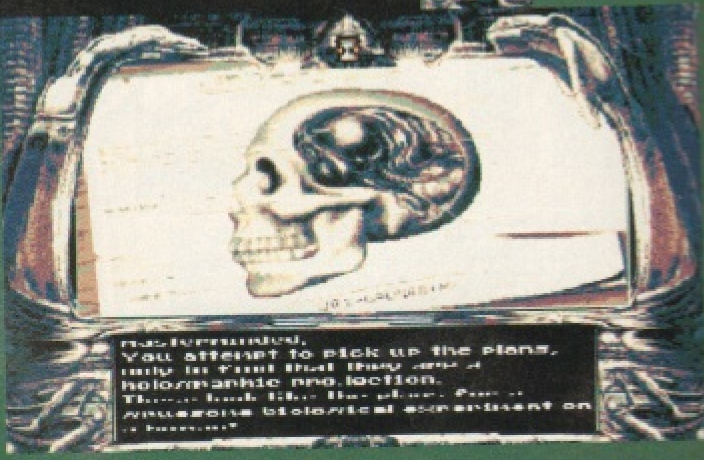
Hard boilde or runny. Watch out for the hatching eggs. As in the Aliens' films, the Queen has been busy laying her eggs and they're all over the place.



If you haven't left the hidden chamber doors open in the real world, then you'll also find them closed in the alien dimension. If you have to go back, you'll lose valuable time and might not be able to complete your mission.



Once inside the alien dimension, Giger's artwork comes into play. Most of the screens are composites of existing artwork that's been culled from Giger's back catalogue.



Aha! You finally discover the grisly fate the aliens have in store for you. The bulging embryo can be seen growing inside your cranium.

GIGERESQUE GRAPHICS

Another quibble is the quality of the graphics and animation. Like the PC version, the Amiga game uses a 16-colour palette so there should really be no difference between the two. However, the Giger graphics used in the alien world look washed out and almost bleary, which is kind of strange, as you'd imagine that his artwork would be ideally suited to the Amiga's limited palette. This is compounded by using almost the same palette for the 'real' world sequences. These, too, use mostly dull colours. Perhaps it might have been a better idea to have Mike's world use a palette of brighter and more vibrant colours to highlight the differences between the two worlds. As it is, the two almost blend into each other. Rather than be impressed with the alien landscapes, you're almost left wondering what's changed. The animation, too, is a bit feeble at times. The main character has been digitised, but not enough frames of animation have been included. Mike never really interacts with his environment; he never stoops to examine something or bend down to pick something up. He just stands their looking a bit of a pudding, really, and he looks so Joe-average that I can't seem many people identifying with him. In fact, on my first go at the game, I deliberately fast-forwarded to the end of the three days just to see him get his comeuppance. There's also a rather clumsy graduated sprite handling routine included in the game so that when Mike move from the foreground to the background he decreases in size and vice versa. Nice idea, but the end result is incredibly jerky and really not worth the bother.

By now, you're all probably of the opinion that I hate the game. Not at all. it's not the best graphic adventure I've played, but then it's certainly not the worst either. Disk access might be slow, especially on a bog-standard A500/600, but there is a lot to do in the game. The Twilight Zone-type music that runs throughout is suitably eerie, if a bit grating after while, and the use of samples is limited but well placed. That, coupled with the easy-to-use point'n'click interface, neat scenario and visual effects make for an enjoyable if slightly flawed game.

THE WORK OF H.R. GIGER

Anyone who has seen the sci-fi movie, Alien, will be familiar with HR Giger's artwork, as the Swiss-based surrealist painter was resonsible for most of the movie's set designs and the pug-ugly alien itself. Born in 1940, Giger originally worked as an architect before developing his skills and branching out into oils and landscapes. Eventually, he became interested in airbrush artwork and it's this technique, more than any other, that Giger uses to bring his nightmares to life. Drawing his inspiration from the work of horror writers, such as H.P. Lovecraft and Shelley, as well as his own fertile imagination, Giger has now published an impressive portfolio of fantasy artwork and his paintings hang in museums all over the world.

It took Cyberdreams a number of attempts before Giger agreed to let his artwork be used in a computer game. He was initially concerned that his work wouldn't translate particularly well onto a computer screen, but his misgivings were largely eased when Cyberdreams decided to use only hi-res graphics to avoid the 'square and jagged' look that Giger had originally complained about.

Once Giger's permission had been obtained, a team of artists set about sifting through the artist's huge back catalogue of artwork to select the most appropriate images for the game. Using Newtek's Digiview digitiser and *DPaint IV* to help tidy up the images, each stage of the process required Giger's personal approval. The results, as you can see from the various screen shots that adorn this page, are some of the most ominous and downright creepy graphics to appear in a computer game.



NEW FOR '93

With two more releases scheduled to appear during the course of the year, Cyberdreams are already beginning to crank up their hype machine. First off the blocks should be *Cyber Race*, a futuristic racing simulation designed by Syd Mead, the bloke responsible for the stunning sets in Blade Runner and 2010. It's a race game with no rules as competing drivers attempt to force each other out of the race by any means possible. Also in development is *No Mouth*, a computer game based on Harlan Ellison's 'I Have No Mouth, And I Must Scream'. Set in a post-apocalyptic world, the game revolves around an omniscient computer that fills the centre of the world. It's a battle of survival as you must lead the remnants of the human race against the computer and eventually disarm and deactivate the renegade machine. We'll have full previews soon.

buyers guide

release date	Out Now
genre:	Adventure
team:	In-house
controls:	Mouse
numbers of disks:	7
number of players:	1
hard disk installable:	Yes
memory:	1Mb

CYBERDREAMS £34.95

"A dark and sometimes dreary sci-fi adventure."

GRAPHICS	82%
SOUND	81%
LASTABILITY	75%
PLAYABILITY	82%

OVERALL 78%

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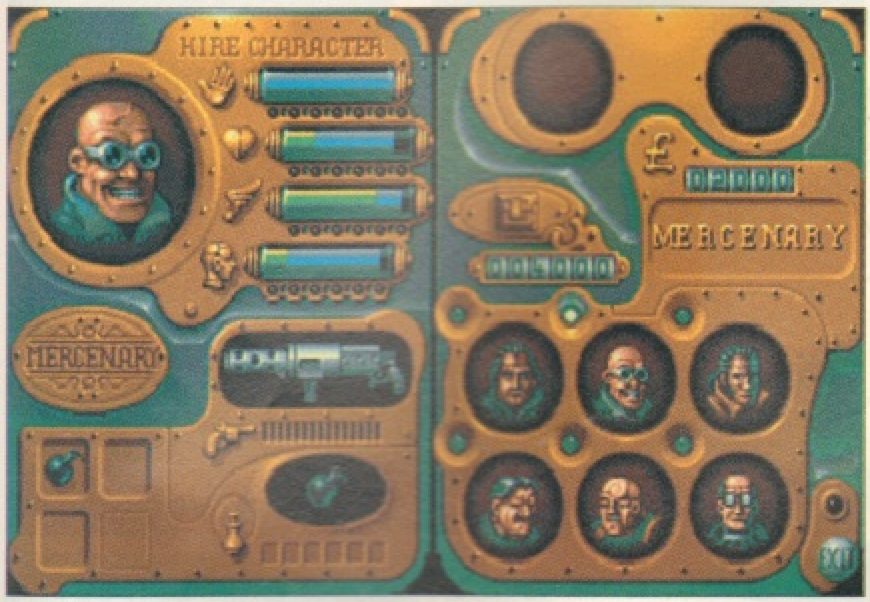
(Amstrad CPC & Commodore C64/128 Disks are not available).

KEY: CBM 64/128 CASSETTE · SPECTRUM 48/128K,+2 CASSETTE · AMSTRAD CPC CASSETTE · ATARI ST · CBM AMIGA · PC & COMPATIBLES

See products for hardware compatibilities

A Victorian steam-driven computer has run amok in the latest game from the Bitmap Brothers. Dan Slingsby gets all steamed up.

THE CHAOS ENGINE



At the beginning of the game, you are presented with a character selection screen which enables you to view the various mercenaries for hire, and also lists their various attributes and skills.



A neat option in the game comes when your fellow player bites the bullet. You're given the option of buying him a new life or leaving him to languish in hell as you have all the fun.

YOU MUST REMEMBER THIS

Remember *Gauntlet*, the arcade puzzle game were you had to run around a series of mazes, solving numerous puzzles, picking up a vast supply of keys and food, and blasting millions of nasties to smithereens? The Bitmap Brothers certainly do, as they've taken the aging coin-op classic as the basis for their new game, *The Chaos Engine*.

That's not to say it's a direct copy – no sireeee! What they've done, instead, is to revamp the gameplay, introduce a few new twists, incorporate some tasty-looking graphics, an excellent sound track and spot effects and generally beef things up all round. What's more, they've also been taking a look at blasters such as Core's *Warzone* and Team 17's *Alien Breed* and introduced a two-player option, a huge number of special weapons and power-ups and a maze of interconnecting screens stuffed to the gills with all manner of mutated nasties to blast. There's even a *Speedball 2*-style equipment screen for increasing the stats of your two on-screen characters and enough tricks and traps to keep even the most hardened puzzle-fanatic happy.

The game's scenario bristles with inventiveness, even though it does owe a big debt to William Gibson's sci-fi novel, The Difference Engine. Although the action is ostensibly set in the Victorian Age, it's an era unlike anything you've read about in history books. The steam engine's power has been harnessed and used to create the world's first ever supercomputer. Unfortunately, the new steam-driven machine has run amok, its creator has disappeared and the local populace have been transformed into malformed mutants. And, as if all that wasn't enough, you've been given the task of clearing the whole mess up!

YOUR FUN TO BE WITH FRIEND

The first thing to do is decide whether you want a one or two player blast. The single player option teams your character with a computer-controlled buddy, while the two-player choice gives you the chance to race around the levels with a friend, helping them out of dangerous situations or leaving them to meet a grisly fate by sitting back and doing nothing. After you've made your choice, it's then that you have to select your two men from a party of six battle-hardened mercenaries. Each character has their own special attributes and weapons, and it's only by experimenting with them all that you'll find the ones that best suit your playing style. For example, the Preacher is a bit lacking in the big gun department but is surprisingly quick on his feet. On the other hand, the Navvy is like a stampeding tortoise at the best of times, although he does pack a tremendous punch with one of the game's better weapons. The other four characters – the Brigand, Mercenary, Gentleman and Thug – also have their own stats. Although these can be increased as the game progresses, their different attributes and skills vary immensely at the start of the game and can only be increased within tightly defined limits.

Once you've chosen which characters you want in your party, it's straight into the action. In total, there are four stages to blast through, and each of these is made up of four lev- ➤



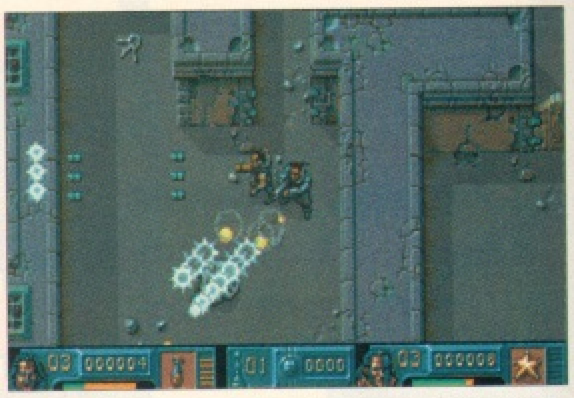


POINTS MEAN PRIZES

Don't forget to collect as much cash and treasure as you can, as all the money you collect is poured into a central kitty and shared out at the end of every two levels. How much you get depends on how well you've performed. If you've done most of the shooting and collected more of the keys and specials, then you'll gain a greater share of the loot than your cowardly partner who has let you do all the running. But having mountains of cash isn't any good if you've nothing to spend it on. This is where the equip screen comes in. After the cash has been divided, you'll be offered the chance to spend some or all of it upgrading your character's skills and weapons. Extra lives, health, speed, power-ups and specials are now yours for the taking – at a price!







When you've finished buying equipment, a password will be given. Write it down, it holds details of the Party's performance. When you next laod up the game you can key-in the password and begin playing from where the password was given.



YOU'RE IN THE ARMOURY NOW

No blaster would be complete without a huge amount of power-ups and different kinds of weapon and The *Chaos Engine* is no different. The Bitmaps have included a vast array of special weapons with which to blow away the opposition. Each character begins the game with their own unique blaster. As the game progresses these weapons can be upgraded by collecting or purchasing power-ups. These can affect the number of shots fired, the damage they do, whether they travel through monsters and the spread of the fire. The best thing, though, is that once you've bought a power-up you can't lose it, even if you lose a life. By the end of the game, you should have built up a near invincible super-weapon for the final confrontation with the super computer.

As well as your main weapon, each player can also choose a number of special abilities. These can be either bought and held in reserve until needed or triggered during the game by walking into their on-screen icons. Specials include such wonderful maiming and killing devices as multi-shot dispersal bombs and huge screen-clearing fireballs.

els. Each stage has its own specific graphics, nasties and in-game music, but the basic gameplay remains essentially the same. The idea is to shoot your way through each level, collecting as many different power-ups, keys, food, coins and special tokens as possible while blasting away the hordes of mutated nasties. Of course, it's not that simple, as each level is a maze of interconnecting pathways and the patrolling mutants warp onto the screen with little notice.

In order to escape the mayhem, there is always at least one exit per level, and these are opened by first finding, and then blasting, a specific number of nodes. These are scattered around each level and activated by shooting away their concrete casing. Once the required number have been activated, the exit will open and you'll be able to enter the next level. Watch out for any remaining nodes once an exit has been opened as this indicates there's another exit somewhere on the level. It's worth heading for the new exit once you've polished off the remaining nodes as this will take you to a more advantageous position on the next level.

A-MAZE-ING

To locate each node, you first have to find the right pathway. With each level resembling Spaghetti Junction, this isn't as easy as it first seems. To make matters worse, many paths are merely dead-ends or take you back to where you started from. To help out, there are a number of silver keys scattered throughout each level, and collecting these will open up new routes and close off existing ones. For instance, a new bridge might appear so your player can cross a chasm or some steps unfold so that he can reach a subterranean passageway. There are also a number of gold keys to collect, and although these aren't essential to completing a level, they do reveal hidden areas positively stuffed with treasure.

There are various other goodies to pick up during the course of the game. These include health-boosting food icons, first aid kits which fully restore a player's lost energy and special 'Death Zone' tokens which, once collected, act as restart points once you've lost a life. Best of all are the numerous special weapon icons, which can include anything from Molotov cocktails and screen-shaking bombs to dynamite and power shots. Keep a look out for map icons, too, as these prove invaluable to finding your way around a level and also detail the exact location of the nodes.

The first stage is set in dense woodlands surrounding the mansion where the supercomputer is housed. Almost immediately you and your buddy will be surrounded by a welcoming committee of mutants that warp onto the screen. In no time you're facing an army of stone-like creatures, huge frog-shaped leapers, and lunging lizard men. The second stage takes in the surrounding grounds of the mansion and features another batch of nasties to take care of. The dilapidated Victorian architecture adds another dimension to the game and instils a real atmosphere to the proceedings.

GAME OVER MAN

Stage three is set inside the sprawling mansion complete with pitted and scarred floors, crumbling staircases and cracked walls. The mutated townsfolk also begin to take on a weirder aspect, too, with huge grabbing hands and spider-like bugs infesting the stage's many corridors and chambers. The final stage takes place in the mansion's basement where the mad computer is housed. Sewer rats, mechanoid droids and missile banks inhabit the area, which is made up of dripping sewer pipes, steam engines and other such artifacts. Once you've managed to battle through that lot, it's time for a final showdown with the supercomputer.

The game's many puzzle elements help spice up the gameplay. Although most are fairly easy to solve, such as collecting certain keys or blasting objects to trigger specific events or functions, some are quite complex affairs. One involves a series of transporters and a clever mirror image of a level so that a player can quickly become disorientated, but is easy to work out once you realise what is going on. Fortunately, the puzzles don't detract from the action, but complement it.

Overall, *The Chaos Engine* is a competent, eight-way scrolling blaster with enough in it to keep you coming back for more. The graphics are up to the high standards we've come to expect from Dan Malone, as is the excellent in-game tunes which keep tempo with the pace of the action, slowing down to a more subdued sound when there's little to blast and speeding up to a thumping rave beat when the screen is flooded with nasties. If you liked *Gauntlet* or *Alien Breed*, then you'll also like this. It's by no means the best that the genre has to offer, but its a frantic blast all the same.

MONSTER MASH

Each stage has its own specific collection of nasties and each one has its own intelligence routines to carry out specific tasks. For example, some monsters spit or shoot deadly projectiles with varying degrees of accuracy while others will pursue a character no matter how hard you try to throw them off your trail. Still others will doggedly protect keys and strategic locations, while many can soak up shots like a sponge before they keel over and die. Each different nasty has its own unique ability – for instance, frogs leap though the air and can cover huge distances while huge stone-men can warp onto the screen in an instant.

buyers guide

release date	February
genre:	Arcade blaster
team:	Bitmap Brothers
controls:	Joystick
numbers of disks:	2
number of players:	1/2
hard disk installable:	No
memory:	1Mb

KRISALIS £25.99

“ Well-crafted *Gauntlet* tribute with extra pazzaz ”

GRAPHICS	86%
SOUND	88%
LASTABILITY	77%
PLAYABILITY	82%

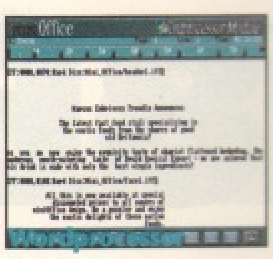
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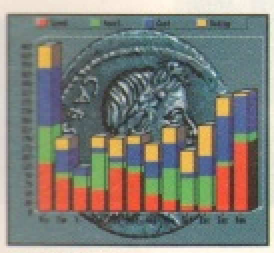
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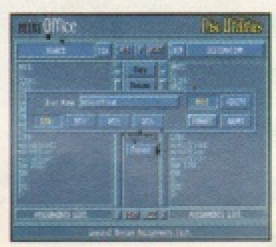


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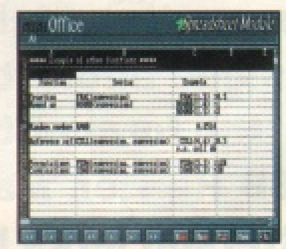

Graphics



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Spreadsheet

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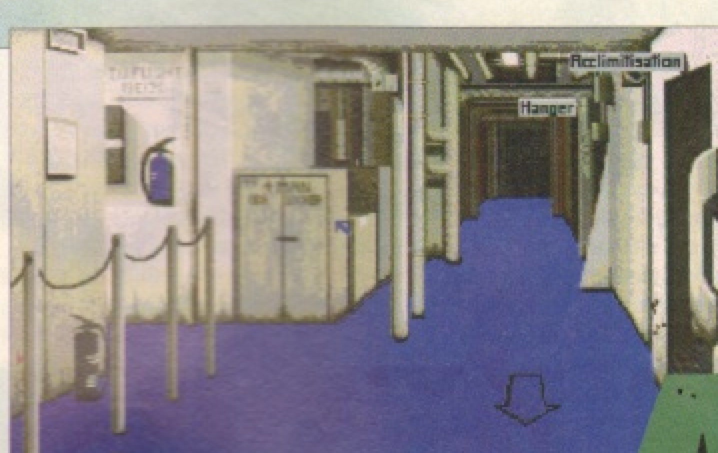
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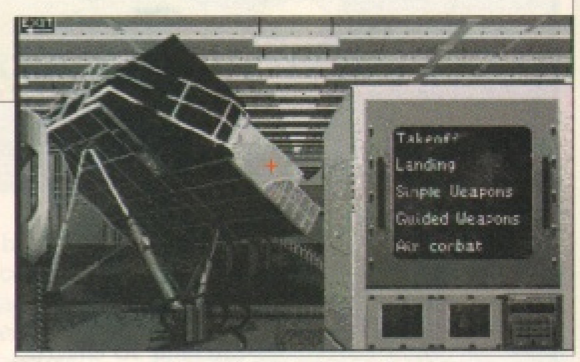
Offer Ends: 30th April 1993



For their first airborne outing since *MiG 29 Superfulcrum*, Domark have chosen another highly unique aircraft in the form of the AV8B Harrier. Mark Patterson jerks his joystick in time to the music.



This is the command centre where you control troop movements and plan your missions.
You get a map of the combat zone with the game, perhaps the should have included one of the aircraft carrier too.



Sharpen your combat skills in the simulation room.

AV8B

VTOL

As you probably know, the Harrier's strength comes from its vertical take-off and landing abilities, a feature which led to it being adopted by the United States Marine Corps as their mainstay support aircraft.

Its primary function is as a strike aircraft, being able to carry a variety of bombs and missiles capable of clearing the way for a marine assault. Its vertical take-off feature also makes it practical for use on smaller vessels, so a marine landing force can travel with air support, vehicles and troops all aboard the one ship.

Initially, *Harrier* seems like just another flight sim, but it soon distances itself from the crowd with stylish presentation and some excellent flight features.

As a U.S. Marine Harrier pilot you're stationed onboard a marine base ship which is floating near East Timor. The standing orders are to help the Timorese resistance overcome the Indonesian army who occupy their country. While the Indonesians hardly sound like a strike force from hell, years of war and a good supply of military hardware from Britain have given them one of the best equipped, battle-hardened armies in the pacific.

GET BRIEFED

All the pre-flight 'action' takes place in various rooms on board the ship. There's the control centre where the missions are planned, troops and weapons placed and intelligence on enemy forces displayed. Going to the store room lets you see how you're doing for weapons, while taking a trip to the flight deck allows you to arm your Harrier with whatever weapons are available. One excellent feature is the simulator room, where you can practice take-offs, landings and the general art of firing missiles at things without fear of getting blown up.

Because of the Harrier's various roles you're never quite sure what kind of mission you're going to get. At the start most of your time is spent on Combat Air Patrol, where you take off, fly around and shoot any unfriendlies that come into range. Later on you're called to weave a path around, or sometimes through, the enemy defenses to strike at specific targets, which will cause plenty of problems for the Indonesian forces.

AIR STRATEGY

One aspect that separates this game from others in its field is that you don't just pilot the plane, you're also in charge of positioning ground forces and helicopter support. With friendly forces also involved in the attack you need to be careful not to get over zealous and open up at the first thing you see, it just might be on your side. Flying the plane is such a challenge on its own that the programmers, Simis, have thoughtfully included a straight combat-only mode which dispenses with the strategy.

Using the Harrier's vectored-thrust engines takes some getting used to. They can be angled at anything from 0-100 degrees – although they can be left alone for normal

A600 vs. A1200

After playing *Harrier* on the A1200 I don't think I could go back to playing it on a mere 16-bit machine. Because the polygon graphics require many mathematical calculations the game runs significantly faster on the A1200. On slow machines the lack of graphic detail is very noticeable, mainly because you get to look at things a lot longer. From this point of view A600 owners are a lot better off sticking with *F-15 2* from Microprose or *Superfulcrum* which is also from Domark.



It's best to be frugal when arming your harrier as you only have a limited supply of weapons. Strategy plays its part in the choice of payload – choose wisely or you may end up with completely inadequate weapons for the mission in hand.



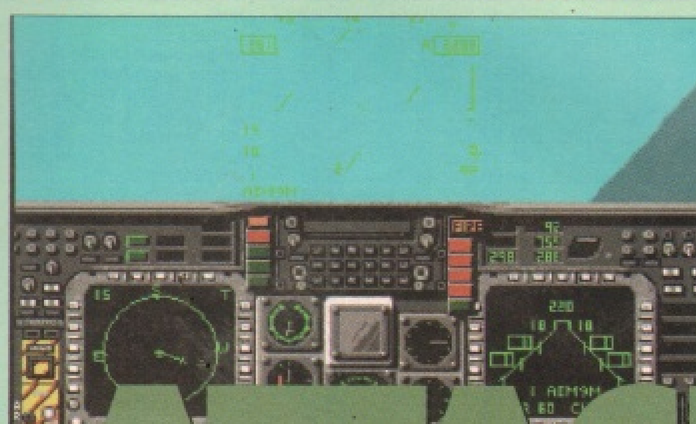
Taking off can be very tricky. The carrier's control tower is difficult to avoid on vertical take-offs. Best to use the ramp at first and leave the vertical take-offs for later when you are a little more experienced.



The cross at the base of the HUD is the sight for your laser-guided bombs. Here you're on a practice attack against an enemy frigate.



Landing can be tricky, especially if your plane is damaged. Sometimes it's worth kicking in the auto-pilot



If you climb too fast the pilot will 'grey out' because there's not enough blood getting to his brain.

HARRIER ATTACK

take-offs, for a vertical lift-off they need to be set to 80. The trick with this is angling them back to zero once the plane is airborne. Do it too fast and it'll stall and you'll crash right back into the deck, too slow and you'll gain too much height and show up like a supernova on enemy radar.

DIGITAL CONTROL

Once the plane is airborne the next thing to master is flying the thing. Analogue joysticks and mouse control are catered for, and these methods provide a great deal more control than with a conventional switch joystick. A handy autopilot mode takes care of trivial things like landing, but you're on your own when it comes to combat. Flying the Harrier is a very tricky business. My first few attempts ended up with some impressive stunts, plenty of crashes and some very unproductive missions.

The Harrier's versatility is further increased by its excellent array of weapons. It's capable of carrying unguided as well as laser guided bombs, Maverick air-to-ground missiles, Hydra unguided missiles, Sidewinder air-to-air missiles and on top of all that it's got a ruddy great gun. Naturally, the amount of ordinance you bolt onto your plane affects its take-off, so a fully tooled-up harrier has a hard time going up from a standing start.

Because the conflict is a good distance from any friendly bases, all your supplies are onboard the ship. This includes spare aircraft (16), troops, vehicles and ammunition. So it's OK to jet in to battle unleashing salvos of rockets, providing you're prepared to enter combat later armed only with bad language.

ON THE DEFENSIVE

Defense is almost as important as attack. Enemy missiles are a constant threat, so the Harrier is equipped with decoy flares, which draw heat-seeking missiles away from the plane. There's also a radar-jamming ECM pod which fixes onto one of the weapon pylons, but being the trigger-happy type, I was more than reluctant to go without an extra pod of missiles just in case I spotted any stray tanks.

Now that companies are starting to bear the A1200 in mind I'd like to see them move away from the traditional vector-based flight sims. After seeing Novalogic's awesome fractal helicopter sim *Comanche* running on the PC, it would be nice to see games like that appearing on the Amiga. Realistically, the existing style of flight sims have gone about as far as they can, now it's only really the aircraft which will change.

In the mean time, this is one of the toughest flight simulators I have ever played. Levelling the Harrier after a turn is a challenge in itself, let alone successfully completing a mission, and not only do you have to master the aircraft, there's also the strategy side to keep you engaged.

If you're into flight sims and you've got an A1200, or even an A600 for that matter, you won't go wrong with this.

buyers guide

release date	**Out now**
genre:	**Adventure**
team:	**Simis**
controls:	**Mouse, Joystick**
numbers of disks:	**4**
number of players:	**1/2**
hard disk installable:	**Yes**
memory:	**1Mb**

DOMARK £29.99

“Great on the A1200, too slow on the A600.”

GRAPHICS	72%
SOUND	75%
LASTABILITY	83%
PLAYABILITY	82%

OVERALL 82%

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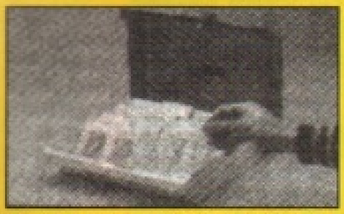
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NICK FALDO'S CHAMPIONSHIP GOLF

Golf isn't just for Brucie and Tarbie and the other celebs, everyone seems to be picking up a club these days. Steve Prizeman put on his tank top and chequered trousers and took a swing at the latest simulation from Grandslam.



Just about to tee off, with a fair-way still to go.

BEGINNER'S LUCK

A daunting feature of many sims is the degree of prior knowledge of the subject that is required, making it difficult for anyone other than an existing enthusiast to get to grips with the game without a struggle. The beauty of this one, however, is the ease with which a complete golf novice like myself (I've never swung a club in anger, and wouldn't know a wood from a mashie!) can learn the basics of walloping the ball along the fairway to the awaiting hole.

You wouldn't expect to start playing at Faldo's standard, of course. Davey Divot, the least capable of the eight computer-controlled opponents you may compete against, has a more appropriate level of skill for beginners to face. But when your ability has increased you may even dare to challenge the Number 1 ranked computer player – Nick Faldo, himself. For a more human approach, up to eight real people may play against each other (although only four at the same time). Stroke Play (get round the course hitting the ball as few times as possible), and Match Play (one on one or two against two) options are available.

Coaching is advisable before launching into a round, however, and who better to pass on his advice than our Nick. On the coaching screens Faldo's disembodied head floats beside printed text to talk you through water hazards, bunkers, and the other perils the avid golfer must overcome. When you feel sufficiently prepared, it's time to choose your clubs, grab a caddy (Bob, Bill, Jim, or Fanny) head for one of the two courses available, and tee off. If your golfer looks familiar, that's hardly surprising – the sprite is based on digitised pictures of Faldo.



Under the grim grey skies of the winter mode the golfer's way is blocked by a tree. You can't go through it, so...



...turn to the side and go past it. Adjusting the direction your golfer faces is a useful and important feature of the game.

BEND YOUR KNEES

The player's stance may be altered, from 'open' to 'Fade' (curve the ball to the right) and 'closed' to 'Draw' (curve it to the left). This is handy if obstacles, usually trees, are between the golfer and the hole. One particularly useful feature of the game is that the direction the golfer faces may be changed – if a tree or water hazard is directly in front of him, just click on one of the arrows at the top of the screen to have him face away from it. The direction in which the ball is to be struck is easily set with the mouse. Amateur and professional modes are available, providing two levels of difficulty, and a 'Mulligan' option on the amateur level allows you to re-take poor shots without damaging your score.

The force of the golfer's swing may be set, and top or back spin chosen depending on whether you want the ball to roll on, or stop abruptly once it hits the ground. Pull out menus from the sides of the screen facilitate easy selection of clubs, show overhead views of each hole and the player's position on them, and indicate the strength and direction of any wind blowing across the course. An important piece of information to check before choosing a club is the lie of the ball. This ranges from perching neatly on top of a tee, to being almost completely buried in sand. Grandslam says the game demands a more realistic selection of clubs than some other golf sims require: players can't simply hack away with the same old club at every different problem (bunker, rough, tangled grass) and expect an optimum performance. Playing conditions should not be ignored, therefore.

HIT THE BALL

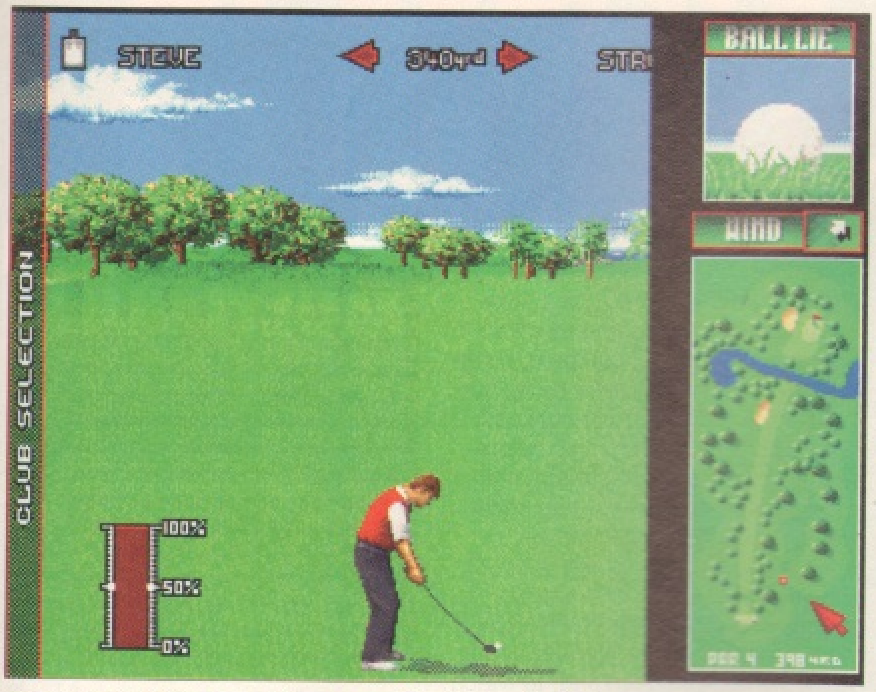
Taking a shot is a simple process, but one which takes a good eye and quick reactions to master. A horizontal bar at the bottom left of the screen appears when a shot is being taken. A narrower, white bar moves into view passing left to right through this, approaching two markers

WHO IS THIS NICK FALDO CHAP ANYWAY?

Only the world's number one golfer, that's who! Born in Great Britain in 1957, Nick Faldo became a professional golfer in 1976. Placed 8th in the European Order of Merit Placings for 1977, Nick progressed to 1st place in 1983 – a status he regained in 1992.

Nick won the Colgate PGA Championship in 1978, the first of many big tournament victories. Amongst the most prestigious of these were the French Open in 1983 and 1988, the Spanish Open in 1987, the US Masters in 1989 and 1990, and the Open Championship in 1987, 1990 and 1992.

Ranked 1st in the world, according to the Sony World Rankings, Nick is a popular golfer as well as a successful one. He has been awarded the MBE, and in 1989 was voted Sportsman of the Year by the Sports Writers Association, and declared BBC Sports Personality of the Year.



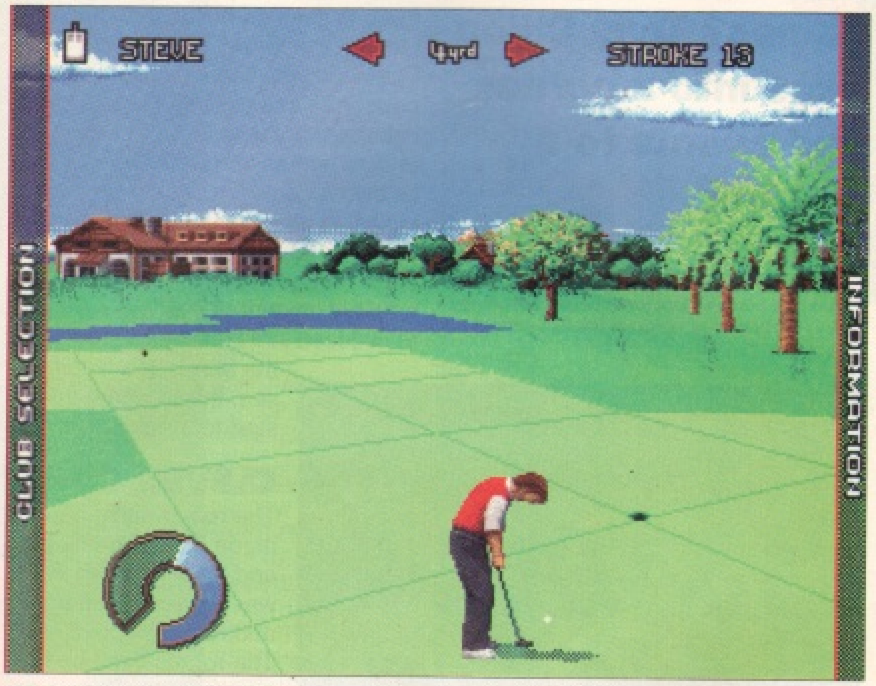
Check ball lie and wind across the course on the right-hand pull-out menu.


Torquay's never looked so good! One of the game's two courses is based on Royal Palms, located on the sun washed English Riviera.

A1200 VERSION

Although this version of *Nick Faldo's Championship Golf* will work on the A1200, Grandslam is currently working on a 1200-specific version. The new model will have 256-colour graphics, and may have extra courses and sampled comments for the caddies. A CDTV version of the game is also being produced.

A disk containing at least one (and maybe more) new courses, and various other features to enhance the game further, is also being prepared by Grandslam.



Gently does it when putting. Study the grid to see how the ball will roll.


A club for every occasion. Choose wisely, even Davey Divot's beating you!

placed along the main bar (I hope you're following this!). The spacing between the markers indicates the golfer's level of the skill with the club he is currently using – the closer they are, the lower his ability; the further apart the greater his skill. When the coloured bar reaches the first marker the player must double-click the mouse button before the bar passes the second marker. Sounds easy, doesn't it, but make the first click too soon and you will hook the ball to the left; make the second click too late and the ball will be sliced to the right. Just to make things more complicated, you can even attempt to add 10% more force to your swing by clicking between an earlier pair of closely spaced markers to achieve a 'wrist snap'.

Coaching and use during rounds will improve a player's skill with his clubs. The degree of improvement can be seen by keeping an eye on the bars drawn next to each club on the selection menu – its length represents the distance between the two markers on the shot-taking bar described above. It's worth improving your skill if only to avoid the sarcastic comments of the less charitable caddies – they're happy to share their opinions with players, and these appear on screen after each shot. Once the green has been reached, a grid is superimposed on the ground to give a more accurate impression of its bumps and dips than would otherwise be conveyed. A more straightforward putting action also replaces the double-clicking swing mode, when taking a shot on the green.

LOOKS GOOD

The standard of graphics gives the game a very classy look, with trees, shrubbery, and the contours of the ground being quite realistic in appearance. (The edges of some of the water hazards look a little too straight and sharp, but that's a minor quibble.) Nice touches, like the way the golfer's shadow follows his movement when he swings, and how the tee is knocked from the ground when he drives are worth watching out for. The splash of fish (and golf balls) in the water, an irritating bird tweeting from the trees, and the rattle of the ball settling in the hole all add to the golf course atmosphere. The intro tune is a mellow little jazz-funk number – it really grated my nerves.

The look of the game also varies depending on the season in which you choose to play, either Spring, Summer, or Winter. Stronger winds blowing across the two available courses in Winter help indicate the way playing conditions are affected by the weather. In Spring the ground is wet and the ball bounces less than Summer; in Winter the ground is hard so the ball will bounce more.

It has to be admitted that this game lacks several features which players of other golf sims, such as *PGA Tour Golf* from Electronice Arts, might have liked to see. There are no fly-by graphics to give an overall picture of the golf course, no replay facility with the route of the ball being drawn behind it, no top-down view of putting, and no isometric cut-away shot of the green to give a really three-dimensional impression of the lie of the land. Whilst no one already possessing a golf sim like that would be missing out greatly by not getting *Nick Faldo's Championship Golf*, the game remains a well-presented and enjoyable addition to the genre. For anyone new to golf sims it is a good introduction – thorough and challenging, but easy to understand, helped by a brief and intelligible instruction manual.



What a cad of a caddie! Sarky comments abound whenever you foul up.

buyers guide

release date	Out now
genre:	Golf Sim
team:	Arc
controls:	Mouse
numbers of disks:	2
number of players:	1-4
hard disk installable:	No
memory:	1Mb

GRANDSLAM £34.99

"Looks good and plays well, but lacks flair."

GRAPHICS	86%
SOUND	68%
LASTABILITY	88%
PLAYABILITY	87%

OVERALL 84%

ROBOSPORT

Have Maxis created the ultimate in Hide-and-Seek games? Tony Dillon goes into a corner and counts to a hundred.

MAXIMUM UNIVERSE

Living in the universe created by the Maxim team isn't all hard work, no matter how it may seem. There is more to life than building and maintaining, you know. There's war. There's sport. There's cheese, ham, pepperoni and pickle rolls. Most important of these is war, of course, and as humankind works its way to its own destruction, it only seems logical to assume that robots will at some stage play a large role in battle. A battle robot would need to have a heavy amount of intelligence if it's to succeed in its task, and as far as the Maxim team can see, this is where things start to break down.

CLEVER COGS

The robots have been made far too intelligent, and have realised that war between humans and robots is pointless. The robots can't be hurt, humans can. Simple as that. So, after many years of pointless and one-sided destruction, a giant battle computer stops the fighting once and for all, with the introduction of the Robot Games. As they are a computer simulation, the games offer humans a chance to compete in battle with no danger of ever being hurt.

If you haven't already guessed, *Robosport* is a strategy title where teams compete against each other in organised wargames. You know the sort, usually played out by advertising executives with paint-firing guns. There are five different games to play here, from the standard Survival, where your team has to be the last one standing, to Catch The Flag, where you have to steal your opponent's flag and return it to your home base, along with new ones like Baseball, where you have to try and tag all four bases for a home run.

The game works like this. Each team takes their turn in ordering their robots about. Once all the orders have been made, the battle commences and you can see the results of your actions. The interesting thing about the game is the way you control your units. Each team starts with four units, and on each turn you plan the actions of separate units for the next 15 seconds by programming a series of moves. Clicking on a location moves the unit to that point, and using the icons on the left of the screen lets you choose between the various firing moves. Everything you do takes time, and as you program, a clock tells you how much time you have left to fill. Ingenious.

PLANNING ORDER

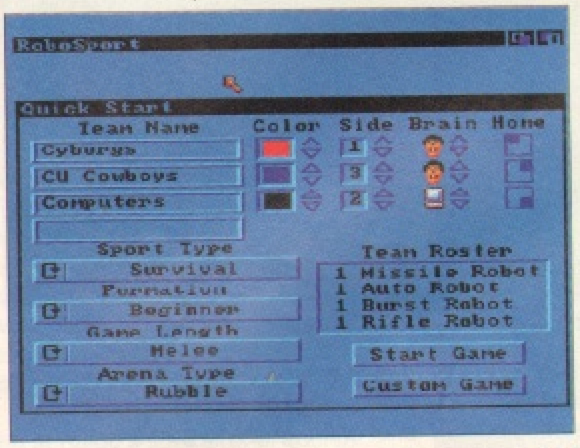
The nicest thing about this system is that it calls for some heavy strategies. The robots have no initiative, so if you think that there's an enemy unit on the other side of a wall, you have to tell the robot to open fire when they reach the other side. Watching the battle as you proceed, you're either going to be pleasantly smug as you watch your unit round the bend and take out an enemy robot right where you thought it would be, or start worrying as you watch your unit fire into space.

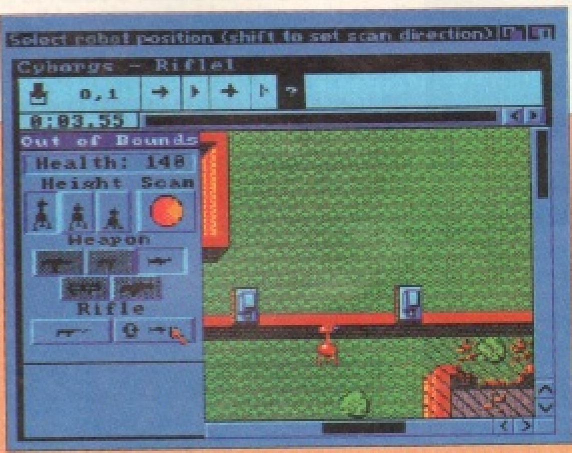
For a strategy title, it's simple to the point of perfection. The control method is so easy to master that you'll find yourself hooked within minutes, and the only game that ever did that for me before was Connect 4. The graphics and sound might not be the hottest ever, but *Robosport* is a hot piece of software. If you liked *Laser Squad*, you'll drool over this.

MULTI FUN

Robosport is the kind of game that's best played against human opponents rather than computer generated ones. Up to four can play at once, in a variety of ways. Either four can take turns on the same machine, or you can network machines, using either null modem cables for a two player game, or connect up to four machines using Commodore's TCP/IP networking system or equivalent. The game plays exactly as before, only now no-one need leave the room!

The set up screen. Here you choose how many players to have and which of the five games they play.





Programming a robot couldn't be simpler. As you click on the battlefield, the robot walks around and your program appears at the top of the screen.



Things don't appear to be going well for the blue team. Those CU Cowboys sure have taken a pasting.



After each turn you can watch the battle unfold using the video controls. Take that!



The overhead battle screen clearly shows each robots position. Surrounding the playing area are the video cameras, which film the action for the viewing millions.

buyers guide

release date	**Out Now**
genre:	**Strategy**
team:	**Maxim**
controls:	**Mouse,Keyboard**
numbers of disks:	**2**
number of players:	**4**
hard disk installable:	**Yes**
memory:	**1 Mb**

OCEAN £25.99

"Highly addictive strategic blastabout. Superb."

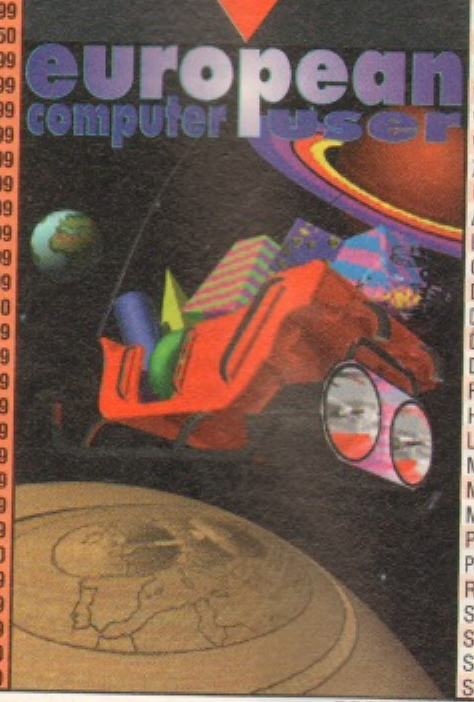
GRAPHICS	68%
SOUND	66%
LASTABILITY	90%
PLAYABILITY	86%

OVERALL 84%

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CU AMIGA FEB 93





The first, but by no means the last to die: Franz Ferdinand and his wife are shot dead by Gavrilo Princip, a Bosnian student.

HISTORYLINE 1914 - 1918

CU AMIGA SCREENSTAR

The gross stupidity of trench warfare in the First World War comes under examination in Blue Bytes latest wargame. Steve Prizeman digs in for victory.

TACTICAL WITHDRAWL

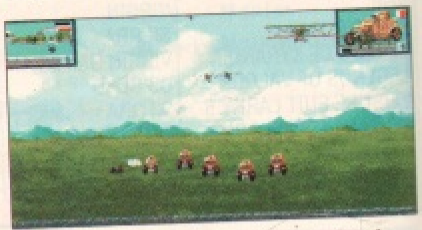
The First World War is not usually noted for its strategy – there wasn't any! Hard pressed soldiers facing each other across a devastated No Man's Land only a few hundred yards wide, languishing in mud filled trenches and being slaughtered by the hundred thousand in wave after wave of infantry attacks and artillery barrages are the indelible picture of the war. Could you have conducted it better? That is the enormous challenge posed in this new strategy game from Blue Byte.

Though noted for its static trench warfare, WW1 actually witnessed an enormous amount of innovation in the nature of the weaponry hurled from side to side. Tanks were invented, the standard of aircraft improved greatly as the potential of aerial combat was recognised, German zeppelin airships and Gotha bombers conducted the first air raids against London and south-eastern England, and submarines became deadly predators stalking merchant shipping.

In *Historyline*, each of the opposing armies receives new equipment as the war progresses. An interval of approximately two months is presumed to have elapsed between each of the 24 battlegrounds, or Maps, upon which the fighting takes place. The green fields and open spaces of the earlier stages, upon which large numbers of cavalry pieces originally appear, are gradually replaced by landscapes scarred with trenches and bunkers whilst cavalry and infantry groups become progressively less effective as the number of tanks, artillery and aeroplanes increases. Although the technological advantage therefore swings back and forth between the Central Powers (Germany and Austria-Hungary) and the Allied Powers (dominated by Britain, France and Russia), this does not mean walk-overs occur as a superficially less impressive range of units may still win a battle if deployed with skill.

LOOKS FAMILIAR

In terms of its appearance and the way it is controlled, *Historyline* follows the format of *Battle Isle* very closely. One player may fight against an army directed by the computer, or two players may compete against each other. Players may choose which power bloc they wish to control, represented on-screen by Germany and France. Two maps appear side by side on the screen, each forming part of the larger Map which forms the whole area of the current battlefield. The Map is divided into hexagons into which the players position the units under their command. Pieces are moved, and various instructions accessed, by joystick wiggling, keyboard tapping, or the mouse (my experience is that the joystick undoubtedly represents the easiest of the available control methods, although a little re-setting is required to have two working at



German aircraft shoot-up a detachment of French Charron armoured cars.



German cavalry dismount to assault Allied bunkers early in the war – a reckless tactic without substantial support.

DISCRETION AND VALOUR

For any software company, and especially a German one, to launch a high quality game closely based upon the First World War is a potentially controversial undertaking. The Blue Byte team tackles the issue head-on, explaining the philosophy of the game in the instruction manual. After declaring their opposition to violence and warfare, they state that 'Never before has entertainment software been so consciously designed to present knowledge and facts to the player in a graphic manner.'

In writing the on-screen text to accompany the game, the team avoided any interpretation of the war, relying on bare facts to allow players to decide for themselves where blame lies, and identify the longer-term legacy of the war. As any historian will tell you, of course, even if concentrating on 'bare facts', the choice of which to include and which to omit represents a judgement which can weight interpretation one way or the other – but let's not get into the theory of writing history or we'll be here all day.

One thing which Blue Byte is clear about is that a *Historyline* dealing with the Second World War will not be produced. The somewhat unpredictable political atmosphere in Germany at the moment makes that just too hot a subject to touch, in their opinion. Further *Historyline's* dealing with the Roman and Medieval eras are distinct possibilities, however, and even one set in Napoleonic times may be considered. No doubt any further developments will depend upon the success of the current game: constructive criticism regarding its concept and design is invited by the company.


Europe – a battleground for dying empires.


The map of Europe was an extremely volatile thing in the troubled era of World War One. Countries were apt to rise and fall in an instant.


The opposing forces are shown in detail as the attack begins. Here, a squadron of Junkers J4-10 prepare to strafe the bunkers.

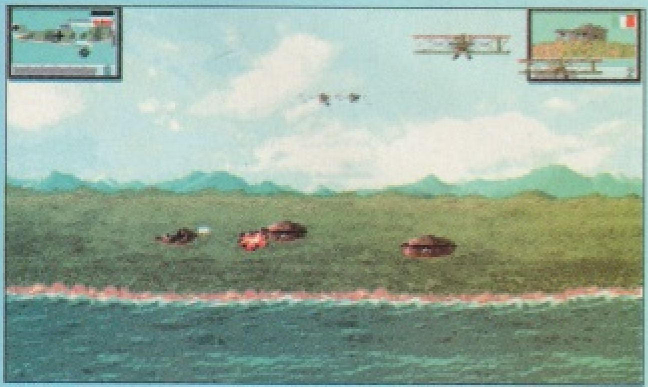

Above: the whole of the current battlefield. Right: the Allied player prepares to defend his bridge.


A typical overhead view of the battlefield: in this instance the player with the left hand screen controls


When attempting to move a particular unit, or selecting its target, the areas out of reach darken, as shown in the panel on the left.


German aircraft launch an attack on Allied bunkers guarding a bridge.


Sopwith Camels, the most famous British fighter aircraft of the war, prepare to dogfight with Junkers J4-10s.


If the 'long battle' option is switched on a combat sequence like this will follow.


'Pack up your troubles in your old kit bag and smile, smile, smile/ While you've a Lucifer to light your fag, smile boys, that's the style...' But mind that glow, snipers may be watching.

once). Movement and action phases alternate between the two players.

The objective is simple enough: each army has a headquarters building on every map, occupy the enemy's and you will win. Alternatively, just annihilate every unit he controls and a brutal but decisive victory will be yours. The game does not offer the opportunity of re-writing history, however. As its name suggests, *Historyline* takes the player through a period in the past; each Map represents a fictitious engagement, and though some of the different landscapes and geographical features are based on real battlefields they are not intended to simulate actual battles. Even if the player controlling the Central Powers wins every Map, the Allies will remain victorious in the war as a whole.

Informing players about the causes and conduct of the war is one of the aims of the game. *Historyline* begins with a brief animation depicting the Western Front in 1916, followed by a smoothly animated sequence showing the assassination of Arch-Duke Franz Ferdinand, heir to the throne of the Austro-Hungarian Empire. He was shot dead by a Bosnian terrorist during a visit to Sarajevo in June 1918 – the event which triggered the war.

During the game, text and illustrations taken from contemporary newspapers appear. They keep players up to date with key events in the course of the real war, and provide nuggets of interesting domestic news from the countries involved – sporting events, for example. Animations are also shown, depicting notable incidents, such as a zeppelin flying above London Bridge during a bombing raid. The animations are drawn well, though with what seems to be a comparatively limited palette, and help the atmosphere of the game.

THE REAL WORLD

The standard of presentation is, overall, very good. Digitised contemporary photographs illustrate the information panels explaining the specifications of each military unit, and battle scenes illustrate each phase of the game in which enemy pieces exchange fire. It has to be said that the standard of background drawing in these sequences is generally greatly superior to that of the sprites superimposed upon them who blast away at each other

The combat itself is not particularly lively to watch and necessitates a large amount of disk swapping if you've only got one disk drive or haven't got a hard disk. One of the reasons why the combat looks less bloodthirsty than might have been expected is that Blue Byte, as a German company, developed *Historyline* to meet the restrictions on the depiction of violence in computer games which exist in that country. Paradoxically, the lack of scenes of carnage lessens the impact of the game, rather than saving it from the accusation of tastelessness which their inclusion might have caused. The WW1-based television comedy series Blackadder Goes Fourth, for example, ended poignantly despite its outrageous and tasteless humour precisely because it never understated the hardship of life in the trenches, or belittled the suffering of the men in them; they went 'over the top' as duty dictated regardless of their desire not to.

The 'long battle' mode may be switched off, however, in favour of the 'short battle' option which doesn't require disk swapping. In the latter, combat takes place swiftly with symbols for the belligerent units simply being placed side by side and those that get destroyed disappearing from the screen. Once you get into the game this is actually more exciting to follow, the battle scenes becoming merely a distraction.

The sound effects are good, and during battle scenes vehicle and weapon noises are clear and appropriate. While players decide their movements and actions on their maps tense music plays in the background; during the introductory sequence the tune is suitably mournful.

Historyline 1914-1918 is an intelligent and enjoyable game of strategy, and represents an interesting development of the genre. It deserves to be a great success.

buyers guide

release date	**Out Now**
genre:	**Strategy**
team:	**In-House**
controls:	**K, J&K, M&K**
numbers of disks:	**7**
number of players:	**1/2**
hard disk installable:	**yes**
memory:	**1Mb**

BLUE BYTE £34.99

'Informative, compelling and playable wargame.'

GRAPHICS	84%
SOUND	83%
LASTABILITY	93%
PLAYABILITY	92%

OVERALL 89%



DALEK ATTACK

Currently found glued to his telly at 7:15 every Friday, Steve Merrett enters Alternative's Tardis to join Patrick Troughton, Tom Baker and Sylvester McCoy in a battle to the death against the Daleks.

MORE THAN NOSTALGIA

Yes, I know that the sets are wobbly, and that the monsters are nearly always a failed rep actor in a wet-suit, but Doctor Who holds a certain magic for me – and before you ask, my complexion is clear, yes I AM interested in women, and, no, I do not possess an anorak. As a wee nipper, watching Jon Pertwee battle against Autons, Sontarans and Roger Delgado's Master was an essential part of my week. And, of course, there were the Daleks. If it wasn't for Terry Nation's gliding creations, Doctor Who probably wouldn't have made it past its initial twelve-week run. However, in the second story in this fledgling series, the Daleks glided up to menace William Hartnell and Co. and, in doing so, won themselves a place in the history books. It's ironic actually that in the 27 years Doctor Who was on our screens, only the Daleks broke the mould of the popular 'men in suits' idiom – although it was the easiness of copying them in the playground which started 'Dalekmania' in the 60s. Whatever the reason for their success, even now in these days of Bart Simpson and the Toxic Crusaders, the Daleks still keep people glued to the telly – well, they would do if the BBC saw sense and brought the programme back!

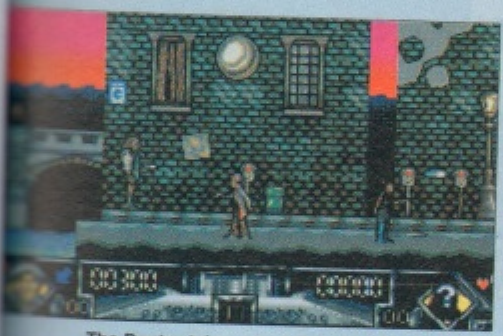
Obviously, for such a long-running programme, there's no shortage of Doctor Who merchandise, but whilst there have been a number of Who derivative games, only two 'official' titles have hit our screens – until now. The first was a tawdry Acornsoft BBC Micro effort, which starred Peter Davison's Doctor as he worked his way through a series of dire puzzles and simplified arcade sequences. The second was 'The Mines Of Terror' by Micropower and starred Colin Baker's incarnation – although, rather sadly, licensing restrictions meant that Micropower couldn't use popular characters such as the Daleks, K9 and Co., and the result was a dull little arcade/adventure involving the Doctor, a metallic cat, and a race of robots who trundled along on castors – sound familiar?

THIRD TIME LUCKY?

Thankfully, no such restrictions limit Alternative's latest attempt at a Who tie-in, but the game still falls short of expectations. Opening with a sampled Dalek tirade and a dodgy, warbling rendition of the programme's theme tune, Sylvester McCoy's face appears on screen to give us a wink before fading away to be replaced by the show's old diamond logo. So far so good then. Next up, an option screen appears allowing the player to choose which Doctor out of Patrick Troughton, Tom Baker and Sylvester they wish to control. In addition, Ace and a UNIT Soldier offer themselves as a companion for later in the game, and K9 also wags his little aerial at the prospect of joining in the fun – I must say, though, that I was disappointed that Jon Pertwee wasn't included, but never mind. On selecting your Time Lord, he duly legs it to the Tardis and dematerialises into the game.

ROLL 'EM

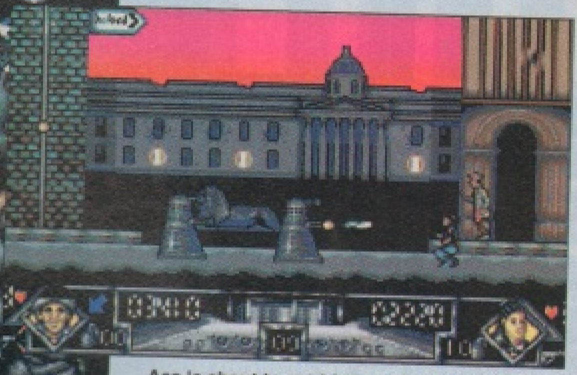
Plans to bring the Doctor on to the big screen have been mooted since Tom Baker stepped into the long scarf of the Time Lord. However, since 1988 a company called Green Light (now called Coast To Coast) have held the rights to produce a Doctor Who film. Although publicity posters have been created and scripts knocked together, no other action has been taken and filming has yet to get started. In fact, the only definite news is that ex-Bond girl, Caroline Monroe, is lined up to play the Doctor's assistant. Although no real news has been given, rumours have been flying around for ages, with Dudley Moore, Rutger Hauer, Donald Sutherland and John Cleese all 'definitely' set to play the Doctor, whilst everything from the Daleks to every monster the series has spawned will be appearing, too. Personally, I'd bank on the TV programme returning first...



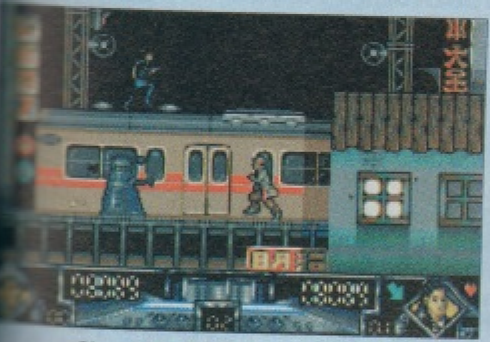
The Doctor takes on an Ogron on the streets of London, while Ace watches his back.



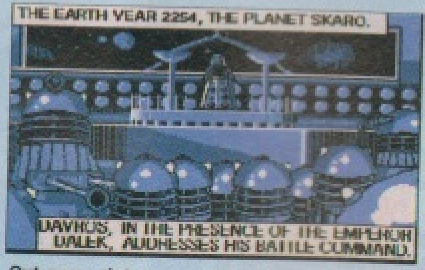
The sprites in *Dalek Attack* are really too small for the player to easily recognise the characters. It's a good job that the coders thought to include Tom Baker's scarf, then.



Ace is about to get fried by the Dalek's ray gun. Can the Doctor save her in time? Cor, cliff-hanging stuff, eh?



Oh, no! The Daleks have taken over Tokyo. Over the years this Japanese city must have seen more monsters than the Doctor himself.



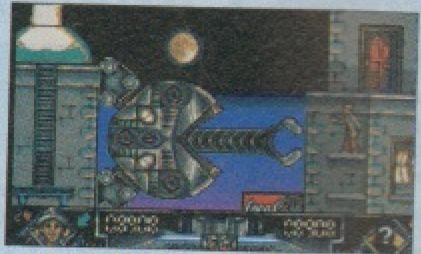
Cut-away plot screens do add something to the atmosphere. It's a pity that a little more animation wasn't used on them, though.



If the Doctor can avoid the Daleks for long enough, maybe they will go rusty in these sewers. Then again, maybe not.



The sewer section involves the Doctor taking to an anti-gravity disc. He has to avoid, or shoot, any obstacles that get in his way.



It's funny, but I don't remember the Doctor having to face a large spherical steel machine. Still, it's all good fun.



Sylvester McCoy's Doctor and Ace race across the rooftops in search of the vital machine parts.

CLASSIC STUFF

It was just over 29 years ago that William Hartnell stepped out of the fog at his Trotter's Lane junk yard to introduce himself to two school teachers who had followed his 'grand-daughter' home. Since then, the mysterious Doctor has regenerated into Patrick Troughton, Jon Pertwee, Tom Baker, Peter Davison, Colin Baker and Sylvester McCoy in his travels across the universe. Along the way, he has also encountered more monsters than you could shake a stick at, ranging from the plastic-based Autons to the sub-aquatic Sea Devils, from the all-powerful Cybermen to the vegetarian nightmare Krynoids. In addition, the good Time Lord has also launched countless TV 'celebs' on their path to fame, too, with people like Jean Marsh, Leslie 'Dirty Den' Grantham, Peter Purves and that woman who plays Gail Tilsley on Coronation Street all making their debut as victims of evil oppressors in the series. But what of the future? Unfortunately, the BBC don't want anything to do with the series and although several independent companies are begging to produce the show, Auntie Beeb is quite content to live on the cash generated by re-runs, videos, books and other merchandise based on the show. But with the show's 30th anniversary just around the corner, who knows what they've got planned...

Unrestricted by a meagre budget and guest appearances by people like Bonnie Langford and Ken Dodd, Alternative's binary vision of Doctor Who is a multinational affair with the Doctor battling against his oldest foes in Britain, Tokyo and the USA whilst simultaneously searching for parts of a machine which will enable him to put an end to their plans forever – however, despite such grand intentions, the game still looks as if the backdrops have been roughly assembled and would wobble if touched! Actually, I'm being rather cruel here, but it has to be said that so much more could have been done with the game's graphics. The Doctor sprites are too small and, although recognisable, are far from impressive. In addition, although Alternative will please die-hard fans with the inclusion of Ogrons (ape-like henchmen), Robomen (converted humans harking back to Hartnell's era), and Emperor and Special Weapons Daleks, the sprites just aren't imposing enough, and it's hard to be intimidated by a Dalek or Ogron which is little more than half an inch tall and is barely distinguishable from the similarly-coloured backdrops.

SEWER FAR SO GOOD

Starting in a sewer setting, the Doctor pilots a Dalek anti-gravity disc which he must steer through the narrow drainage system – shooting anything which gets in his way as he goes. Yes, indeed, Alternative have broken the good Time Lord's life-long tradition of not killing things unnecessarily by arming him with a laser gun – although on later stages, Alternative try and validate this by explaining that it isn't in fact a laser gun but a specially-modified Sonic Screwdriver. Hmmmmm. Oh well, once out of the sewers and having defeated what appears to be a two-headed Loch Ness monster in a dull blasting match, the action switches to that of a conventional arcade/adventure with the good Doctor out-running the aforementioned Daleks, Ogrons and Robomen in search of the machine parts. This section proves extremely tough, and even with the extremely agile 793 year-old leaping from platform to platform, it often seems nigh-on impossible to avoid the pursuing baddies. Providing our hero's energy holds out, though, he eventually gets to repeat the pattern throughout the said countries, before eventually heading towards Skaro – home of the Daleks and base of their evil leader, Davros.

I'm not sure if I was expecting way too much because I'm such an ardent fan of the programme, but *Dalek Attack* falls short on a number of counts. Admittedly, the game proves quite fun in the short-term, but prolonged play prompts irritation thanks to numerous 'no-win' situations, and I'm also disappointed by the platform action the programmers opted for. Bearing in mind that every story climaxed with the Doctor outwitting his foes, I feel that *Dalek Attack* would benefit from more puzzles in the action. Also, the general 'look' of the game wrecks the multi-national 'epic' scenario the game is given by making it look dull and lifeless. It's by no means a complete loss and I'm sure that it's sub-twenty quid price will win it a lot of fans, and Alternative are indeed to be commended for this price point, but even so I hope when Alternative have another stab at the licence – and I sincerely hope they do as they are on the right track – it regenerates into something better than this.

buyers guide

release date	Out now
genre:	Arcade
team:	In house
controls:	Joystick
numbers of disks:	2
number of players:	2
hard disk installable:	No
memory:	512k

ALTERNATIVE £16.99

" Dalek Attack is fun but extremely dated... "

GRAPHICS	68%
SOUND	69%
LASTABILITY	76%
PLAYABILITY	73%

OVERALL 70%

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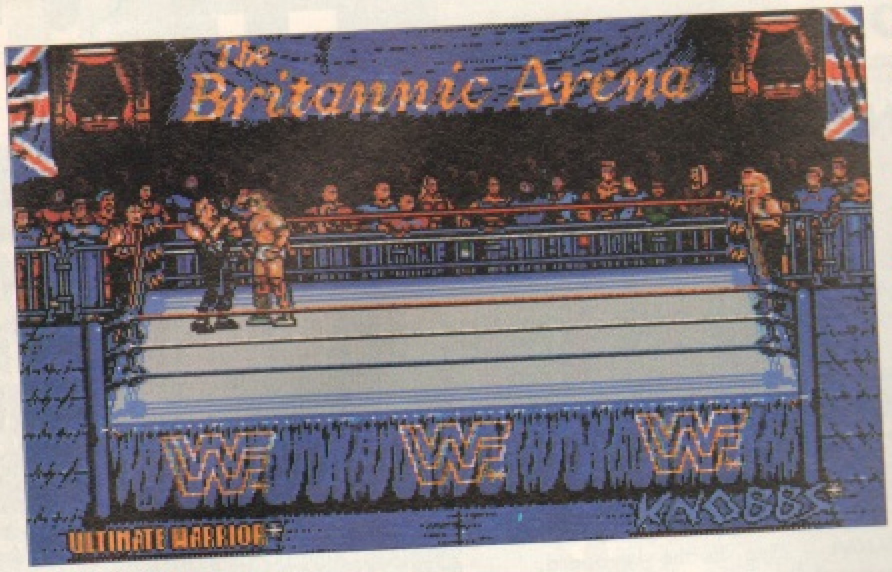


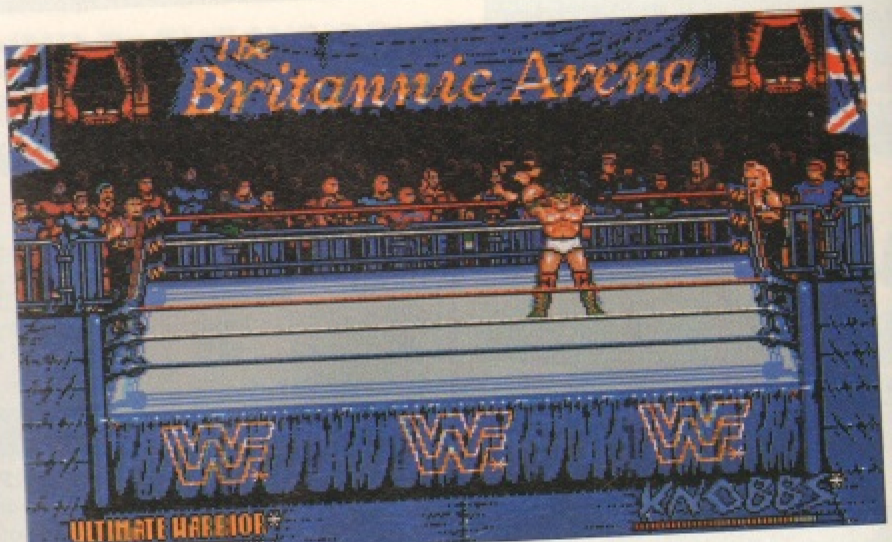
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The boys in spandex are back for a second Amiga outing, and this time they've hit Europe. Mark Patterson puts a choke hold on his pen...

WWF EUROPEAN RAMPAGE



The Hitman on the receiving end for once. Saggs is just about to pound our greasy-haired friend unless you can hit the fire button fast enough.

HOLD DOWN

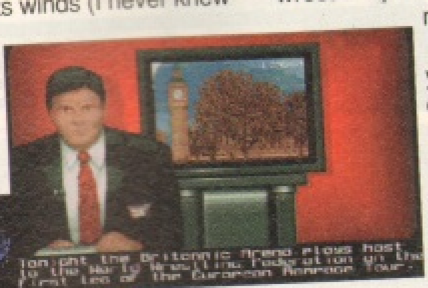
The aim of the game is to take your tag team through four bouts culminating in a challenge for the world title. There are four wrestlers to choose from: Bret Hart, Ultimate Warrior, Randy Savage and the ubiquitous Hulk Hogan. Opponents include the Nasty Boys, Legion Of Doom and the Natural Disasters (whose combined weight is almost half a ton!).

Each wrestler has an energy bar which is displayed at the bottom of the screen. As they take hits it starts to deplete and if it drops below a certain level the wrestler can be pinned to the mat with no hope of getting up. Out of ring combat is actively encouraged, mainly because hitting the hard ground does more damage. The only problem with carrying your battle outside the squared circle is that the ref starts a 10 count the second your feet hit the floor. If you don't get back in before he shouts 10, your team is disqualified.

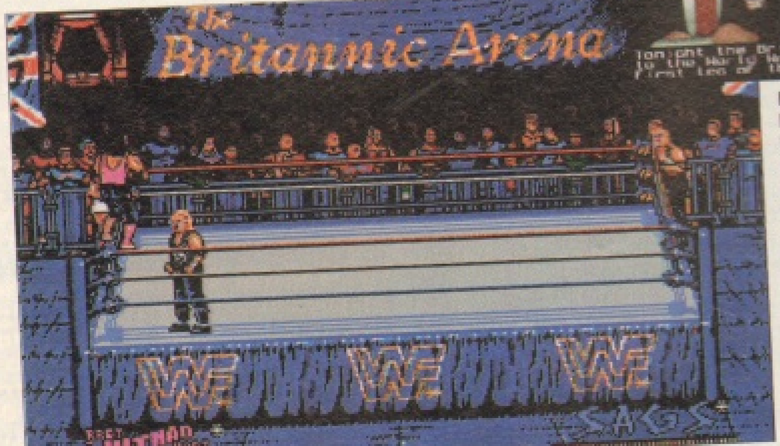
Before your wrestler can start chucking his opponent around he has to stun him. Depending on how far away he is, hitting the fire button makes him lash out with either a foot, fist or elbow. Three hits winds (I never knew it was possible to 'wind' 300 pounds of fallen chest packed into a leotard) the other wrestler leaving him ripe to be thrown. Merely hurling them onto the mat does a fair amount of damage, but for maximum effect they should be lobbed over the ropes to the concrete floor.

For a showy finish to a combination of moves, a wrestler can take to the top of a turnbuckle and launch a flying kick at a winded opponent. While making contact causes sizeable damage, missing with such a high-risk manoeuvre leaves the leaping wrestler sprawled on the mat at the mercy of his foe.

Getting in close allows your wrestler to put the other guy in a hold. Unlike TV wrestling where they go for the submission the characters in the game just lose plenty of energy when on the receiving end of a head lock. This move is best followed up with some kind of throw, to cause enough to damage to leave the recipient flat on his back for some time.



In between bouts there are cut away scenes to a TV reporter. These help set the tone for the fight.



The Hitman back on his feet and about to launch them directly into Sags' face!

AERIAL SPIN

Most of the time winning a bout is dependent on how fast you can hit the fire button. When you're on your back you have to repeatedly hit the button to get up, when you're brawling you need to get your hits in first and when the wrestlers are grappling whoever gets the most button presses in comes out on top.

While this is a respectable game, there are several things that would have made it better. Out of all the WWF wrestlers you only get to choose from four, two of which, Warrior and Hogan, aren't in it any more. Another thing that bugged me was that all the wrestlers had exactly the same moves, whereas their real-life counterparts nearly always finish off their unfortunate opponent with some highly unlikely signature move. But the presentation is significantly better than in Ocean's previous attempt at a WWF game, as now there's sampled speech and each character has their own music.

DROP KICK

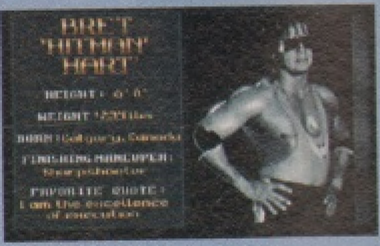
The character graphics are colourful, if not very detailed. Personally, I prefer the Megadrive and Super NES *WWF* games as the graphics are much better and there are far more moves.

Only having four bouts doesn't help the game much. Although I stopped playing out of boredom after a very short time, I'm sure it wouldn't have taken much of an effort to complete it.

As wrestling games go this is about the best on the Amiga, then again, that isn't saying much. Definitely one for the kids.

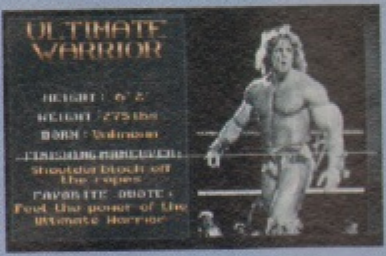
MEET THE GUYS

BRET 'HITMAN' HART



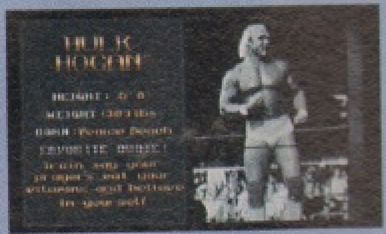
One of Bret's most formidable weapons is the several pounds of grease he carries in his hair. Armed with this he can slip out of the tightest head lock. His trade-mark move is the sharp-shooter, which involves turning his opponent over, grabbing their legs, then trying to bend their spine 45 degrees in the wrong direction.

ULTIMATE WARRIOR



Ultimate usually kicks off a bout by running around pulling the ropes. For some reason his opponent never takes advantage of this and usually waits for Ultimate to run across and hit them.

HULK HOGAN



Until this guy hit the big time, wrestling was just a bunch of fat men in spandex throwing each other around, now it's a bunch of rich fat men throwing each other around. Part of his popularity is due to his ability to absorb enough damage to stun an angry bull elephant, roll around then get up, suddenly immune to pain and further damage, then clobber his opponent into submission.

MACHO MAN RANDY SAVAGE

If his opponents aren't blinded by his ridiculous gear, Savage soon goes to work by launching himself off the turnbuckle and elbow-first onto their heads.

LEGION OF DOOM

This formidable tag team consists of Hawk and Animal, two geezers with strange hair cuts and a passion for face paint. They ensure they aren't attacked before the bell goes by wearing spiked body armour.

NASTY BOYS

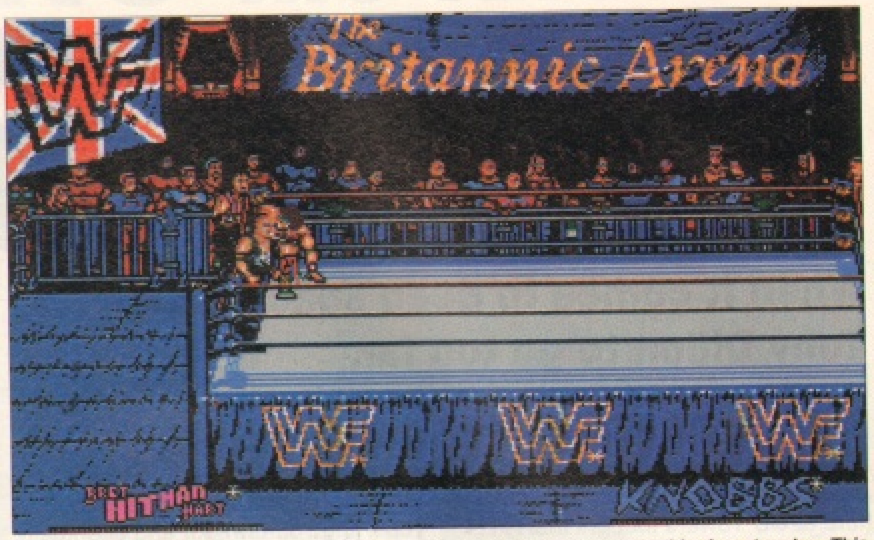
These ex-WWF Tag Team Champions are a bit of a push over in the game. In real life they're a lot tougher, especially with their trade-marked pit-stop move, where Nasty Boy Knobbs rubs some unfortunate wrestler's face into the armpit of his partner Saggs.

NATURAL DISASTERS

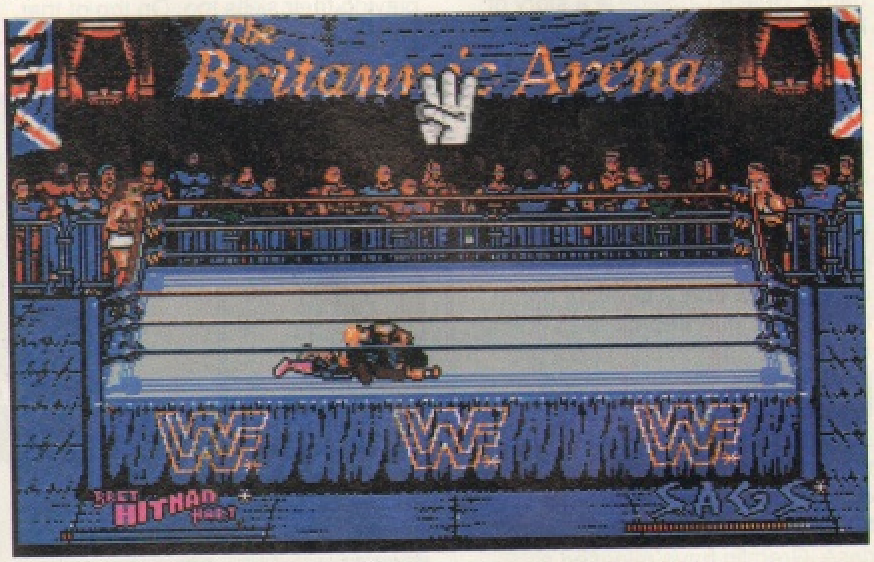
These behemoths are the largest tag-team in WWF history. The drawback with being so large is that it's almost impossible for them to realistically lose a bout, which means they don't make too many appearances now.

MONEY INC.

Although the Legion Of Doom are the team to beat in the game, Money Inc. are the actual tag team champions. They prefer bribery to actual fighting.



One good tactic is to keep your opponent away from his corner to prevent him from tagging. This way you can stun him, bring in your partner and set about him with full energy. A wrestler on the end of a severe battering takes far longer to recover, so his partner will be reluctant to make a tag.



Bret's pinned beneath Sags' lardy body and the only way for him to escape is for you to hammer the fire button. Seeing as Sags has all his energy and Bret is a stretcher case, there doesn't appear to be much hope for him. If he does escape he'd better make a tag straight away to bring in the Ultimate Warrior who should be at full strength after watching his partner get pulverised.

buyers guide

release date	Out now
genre:	Beat'em up
team:	In house
controls:	Joystick/Keyboard
numbers of disks:	2
number of players:	1/2
hard disk installable:	No
memory:	1Mb

OCEAN £25.99

"Best of a very bad bunch. One for the kids."

GRAPHICS	75%
SOUND	83%
LASTABILITY	72%
PLAYABILITY	76%

OVERALL 74%

SPACE CRUSADE
THE VOYAGE BEYOND

When it comes to deep space, trust Tony Dillon to go too far.

IF YOU'RE FEELING BOARD

Just in case you can't remember, we here at CU Towers thought that Gremlin's *Space Crusade* was a very nifty little game. Modelled around the Hasbro board game of the same name, *Space Crusade* is a story of life, death and war aboard gigantic alien battle-cruisers. You, and up to two other friends have to board and then destroy as many aliens as possible, while trying to complete a preset mission at the same time.

However, like Gremlin's other Hasbro license, *Heroquest*, most people found the missions a little too easy. I know I did, the entire game taking less than a week to complete. It's hard to say exactly where the problem was. Were the enemy units too easy to destroy? Were the missions too simple to complete, most of them revolving around finding an object and then either destroying it or taking it off the ship? Whatever the case, Gremlin have released a sequel, and it's a damn sight more challenging

What you have here are 10 new missions for the original game, ranging from quite hard (collect a Soul Sucker egg from a ship populated almost entirely by Soul Suckers, one of the original game's nastiest creatures) to insanely hard (defeat the Soul Sucker Queen, a huge creature with about 37 different weapons all firing at once). Believe me, these are hard. It took me five attempts to complete the easiest one, and that's saying something.

SUICIDE SCAN

The game is played out primarily on a map view, with only line of sight aliens shown on screen. However, some space marines are equipped with a lifeform scanner, which will show the number and location of nasties in the immediate vicinity. Unfortunately, it doesn't tell you what they are – they are identified simply as white stars. In the first game, it was sensible not to use the scanner, as the computer rarely activated aliens that hadn't been located. Using the scanner on this upgrade is suicide. I did once, and soon found myself surrounded by no less that 15 Soul Suckers inside of two turns. I told you this was hard.

That's not all, either. The Soul Suckers are now small fry compared to what else you can find on these ships. Bacteria roams free over some walls, and if you stand next to them, you'll find your armour and eventually your energy dripping away. Space Ogres are quite capable of tearing you limb from limb, and enjoy displaying their skills too. On top of that you have all the aliens from the original and a new kind of Dreadnought (ED-209 in appearance, King Kong in performance).

Things aren't all bad, though. You have a few new weapons and equipment/order cards to play with. You can have a force field for your Commander, if your rank is high enough, as well as numerous other toys to pad out your offensive. However, to qualify for them, you need to have a high rank, and you aren't going to get a high rank with these missions. The best way to play this game is to work your way through the original first, and use your saved game disk on this.

Surprisingly enough, the graphics and sound have been given a bit of an overhaul. Not much, just a little bit. The players and aliens are slightly better defined, as are the backdrops, although the two-frame animation during combat still needs some looking at. Interestingly, the background effects, such as the distant alien groans and the occasional beep of machinery has been replaced with some pieces of music. It's not bad, but I prefer the atmospheric silence, to be honest.

Other than that, there's little I can say. If you enjoyed the original, then get hold of this. If you're struggling with the original, practise, then get hold of this. If you haven't got the original, where have you been? Get it now.



Just one of the many new equipment cards. How about a forcefield to make life that little bit easier.

ANY OLD DISKS?

If you've looked at the price in the verdict box, and are confused by the two prices. I'll explain. Gremlin are releasing Space Crusade – The Voyage Beyond in two boxes. The first will contain the original Space Crusade game plus the expansion for a mere £25.99. The second package, aimed at owners of the game will contain only the expansion. Unusually, the expansion doesn't require the original disk to play, and only calls for it for the sake of verification.

See, I told you not to use that scanner! Look what's happened now!





In space no-one can hear you scream. Another one bites the dust!

buyers guide

release date	**January 1993**
genre:	**Strategy**
controls:	**Mouse**
numbers of disks:	**1**
number of players:	**3**
hard disk installable:	**No**
memory:	**512k**

GREMLIN £25.99/£9.99

"Involving strategic title, with superb graphics."

GRAPHICS	83%
SOUND	81%
LASTABILITY	84%
PLAYABILITY	78%

OVERALL 81%

INTRODUCING the latest quality Amiga products from

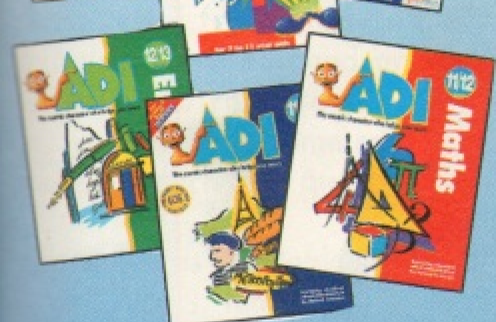
europress SOFTWARE …the market leaders in educational software



- **FUN SCHOOL 4** – Three packages to suit young people from 5 to 11 years. Each contains six easy-to-use programs aimed to stimulate learning while being challenging and fun, following National Curriculum guidelines. Page 2 →

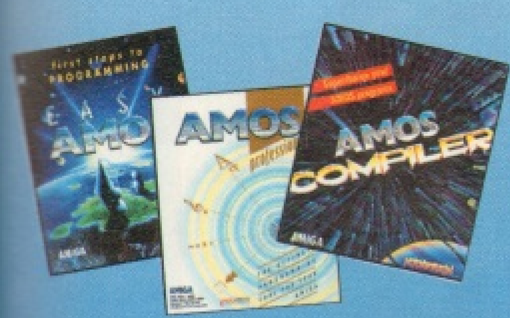


- **FUN SCHOOL SPECIALS** – A series of three packages to support the Fun School 4 series, by adding depth to spelling, maths and creative skills. Page 3 →



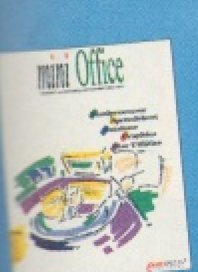
- **ADI** – This extraterrestrial helps young people from 11 to 15 years to learn English, French, and Maths. There are 12 packages in the current series. Page 4 →

europress SOFTWARE …the specialists in Amiga programming



- **AMOS** – A series of five packages designed to encourage the user to program. The range consists of AMOS the Creator, easy AMOS, AMOS Compiler, AMOS 3D and the very latest – AMOS Professional – designed to appeal to users just starting out on the programming road and to experienced programmers alike. Page 6 →

…and now – Mini Office Amiga!



- **MINI OFFICE** – The complete Amiga office workstation for both home and business purposes. Containing five modules – wordprocessor, database, spreadsheet, graphics and disk utilities, all connected by a versatile menu system allowing movement between different modules with ease. Page 8 →

europress SOFTWARE

Europa House, Adlington Park, Macclesfield SK10 4NP

Tel: 0625 859333, Fax: 0625 879962

Help your child to a brighter future – with the best in educational software



Fun School 4 zooms to the top of the class. Three brand new packages combining the essentials of the National Curriculum with beautiful graphics, cleverly animated rewards and stimulating sound keep your children engrossed while they learn.

Teddy for **under fives**, Freddy the Frog for **five to seven year** olds and Sammy the Spy for **seven to eleven year olds** provide **SIX** original stimulating programs in every pack. Plus, the carefully designed levels for each program encourage your children to have fun and learn at their own pace – and ensure they get the most from Fun School 4 and keep coming back for more.

europress SOFTWARE

...making learning

Education is never out of the news these days, and it's only natural that parents have become more concerned than ever about the standard their children are attaining. At Europress Software we have responded to that concern by putting together a complete range of educational software to complement children's education at school, in line with National Curriculum guidelines.

Our Fun School range caters for children aged 3 to 11 years, covering a comprehensive range of topics from learning to recognise shapes and colours for the younger user to science questions and keyboard skills for the older child. Each subject complements what children are learning at school.

In response to demand from teachers and parents we recently launched the Fun School Specials which concentrate on three important areas – Spelling, Maths and Creativity – where parents wanted more support.

Our brand new ADI range is primarily used as a learning aid to prepare students for GCSE exams. ADI covers Maths, English and French for first to fourth year students, featuring a friendly extraterrestrial who provides some light relief from studying. Each subject has been extensively researched and adheres to the National Curriculum requirements. ADI is already being incorporated into some schools' timetables, proving the benefit of such high quality educational software.

ADI Junior is available for children aged 4 to 5 and 6 to 7 years, featuring a "young" ADI who teaches counting and reading. Each program features bright, colourful graphics, attention-grabbing sound and plenty of games to keep the child amused while they learn.

If you want to give your child a head start in their education, please contact our Customer Services who will be happy to help you. All Europress Software products are available from your high street software stockist, or by mail order.

Europress Software
Europa House
Adlington Park
Macclesfield
SK10 4NP

Tel: 0625 859333.



g an exciting experience

Now the fun

fun school Specials

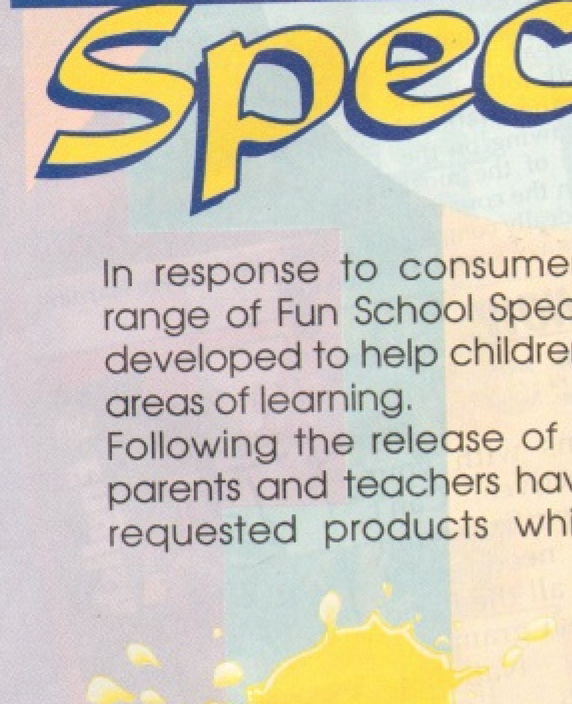
Three brand new programs from the makers of Fun School

In response to consumer demand, a range of Fun School Specials has been developed to help children with specific areas of learning.

Following the release of Fun School 4, parents and teachers have consistently requested products which focus on certain subjects in more depth – in particular spelling, maths and creativity skills.

The aim of the Fun School Specials is to complement children's school work. All the products comply fully with the National Curriculum syllabus.

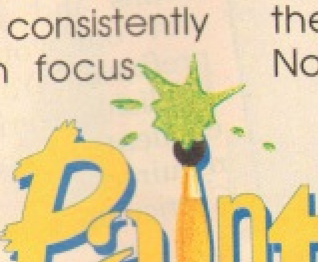
Paint and Create



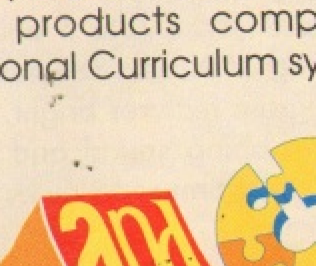
For five year olds and over

- Paint and Create is designed to help children exercise and develop their creative talents to the full.
- It consists of six entertaining activities, some with a practical bias, some which are pure fun.
- Programs within Paint and Create include Art Alive, Jigsaw, Music Maestro, Card Creator, Monster Maker and the Activity Menu which allows access to all the other programs.
- Available for Amiga, PC and C64 cassette.

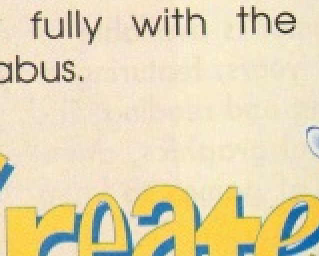
ART ALIVE



CARD CREATOR



MUSIC MAESTRO



europress SOFTWARE ...injects new life

...really begins!



Spelling FAIR

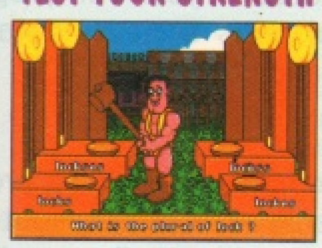
For 7 to 13 year olds

- A unique package designed to help children master basic spelling techniques.
- The six programs within the package are set in a colourful fairground and incorporate the essential fun element that has made all Fun School products so popular.
- Sixty levels of difficulty to suit children of all ages and abilities.
- The package incorporates a 3,000-word dictionary containing carefully-selected words which frequently cause children difficulty.
- Parents or teachers can easily create their own mini dictionary of words that require special attention.
- Special selection of words to cater for the needs of dyslexic children.
- Available for Amiga, PC and C64 cassette.

HAUNTED HOUSE



TEST YOUR STRENGTH



CIRCUSWORDS



Merlin's Maths

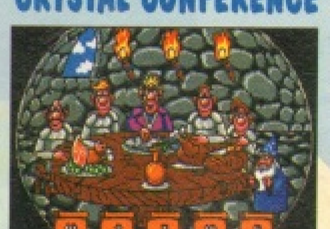
For 7 to 11 year olds

- Merlin the Wizard guides the child through exercises in counting, decimals, fractions, adding, subtracting and volumes.
- Merlin's Maths combines the essentials of eye-catching graphics and rewarding sequences to keep children amused while they learn.
- Each program within Merlin's Maths has at least three levels of difficulty.
- Available for Amiga and PC.

BROKEN BATTLEMENTS



CRYSTAL CONFERENCE



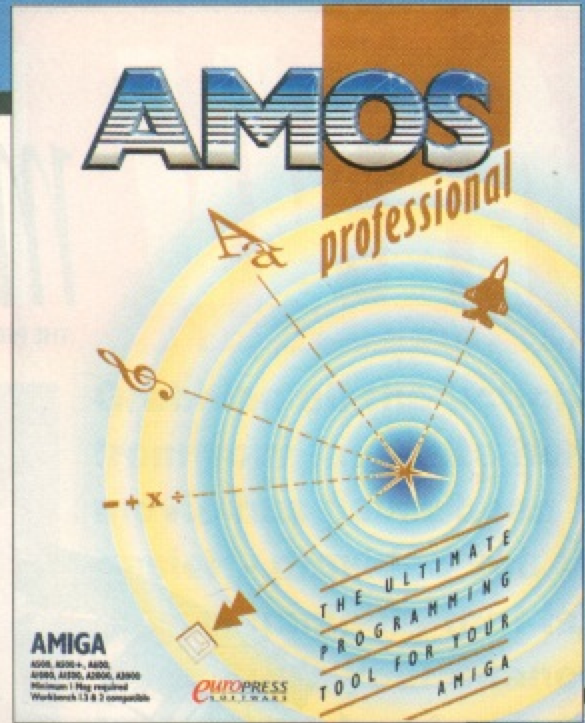
MERLIN'S MATHS





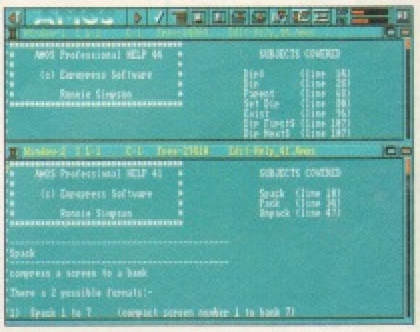
...into hard-to-teach subjects

Now AMOS has turned Professional!

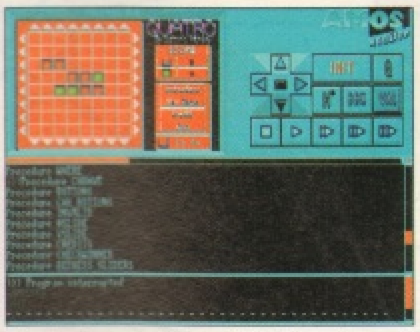


AMOS The Creator has brought programming within the reach of over 50,000 Amiga users. Now it has been given a complete overhaul and the result is a vastly enhanced product – AMOS Professional – designed for all experienced Amiga programmers.

AMOS Professional has 200 new commands, taking the total to over 700. Included in the package is a 650-page manual written by Mel Croucher who wrote the highly-praised Easy AMOS manual, and Stephen Hill who wrote the original AMOS manual. Programs written using earlier versions of AMOS and Easy AMOS can be loaded into AMOS Professional for amendment or enhancement.



Write programs with ease using the feature packed Editor



Track down problems fast in the advanced Monitor Mode

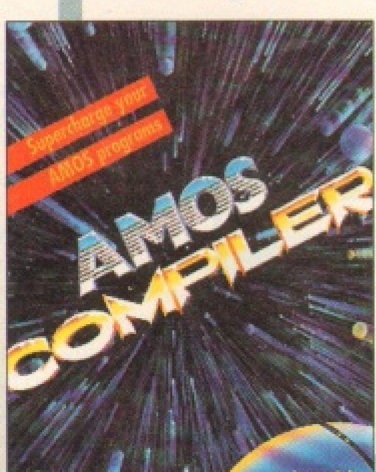


You can get serious too – File O' Facts shows just what's possible

- On-line help provides details of the command at the cursor position – another click takes you to a fully documented working example.
- A new editor with drop-down menus, keyboard macros, advanced undo/redo, and multiple windows on screen.
- IFF animation playback that runs faster than in DPaint.
- MED music library support with MIDI data send, Noise Tracker support, easier access to the printer, serial and parallel ports and much more.
- MOUTH commands to link sprites to speech output from the SAY command to create a realistic talking head.
- Two discs crammed with working examples, and tutorials demonstrating AMAL, the new AMOS Interface system, collision detection and other key topics.
- A selection of new highly-finished programs, including Planet Zybex, a scrolling shoot-'em- up, the File O'Facts electronic data organiser, Quatro puzzle game and Dithell's Wonderland, an eight-way scrolling platform game.

The result is a package which will more than satisfy home and professional AMOS users. It's fun to use, offers lots to learn – it's essential for the Amiga.

Supercharge your creations



Now you can make your AMOS programs run like lightning with **AMOS Compiler.** Typically most programs will **double in speed** – some commands are more than **5 times fatser.** These spectacular results will have everyone thinking you've programmed in machine code!

In addition, AMOS Compiler comes with an incredible compactor which will squash the size of your programs by up to 80% **(60% compression on average)** in a matter of seconds! This means that your programs take less disc space – and they load faster too.

With the incredible speed increases and program compaction the AMOS Compiler will give your programs that professional edge.

With every AMOS Compiler is a special program which will update your copy of AMOS to the very latest version – and that means improved extension handling, smoother multi-tasking, plus new sprite flipping routines and BOB and SCREEN COPY routines.

If you're amazed by AMOS you'll be astounded by AMOS Compiler.

The current AMOS Compiler will work with AMOS Professional, but a full new Compiler will be released next year which will take advantage of all AMOS Professional's new features.

a into a unique creative tool

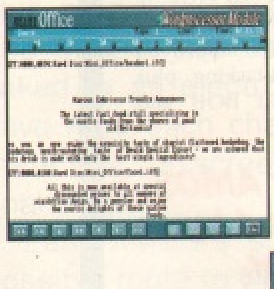
mini Office

THE PERFECT ALL-IN PACKAGE FOR YOUR HOME OR BUSINESS

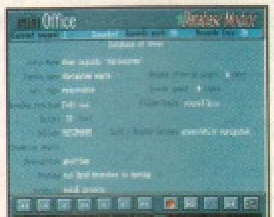
FIVE MODULES FOR JUST £59.99!



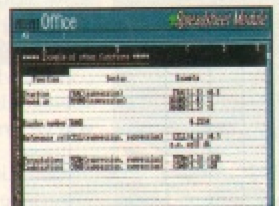
- A professional **WORDPROCESSOR** with powerful graphics capabilities and a 50,000 word spell checker. Ideal for a wide variety of correspondence and official documents.
- A versatile **DATABASE** which is simple to use and powerful enough to deal with anything from basic address book functions to club membership lists and business records.
- A flexible **SPREADSHEET** with more than 50 functions, simplifying the most complex domestic monthly budgets or commercial cash flow forecasts.
- A supremely friendly **DISC MANAGER** to make using your Amiga as painless a task as possible.
- Incredible **GRAPHICS** with more than 18 types of graphs and charts available to brighten up your presentations or make your month by month financial situation as easy to appreciate as possible. You can even make use of eye-catching 3D effects!



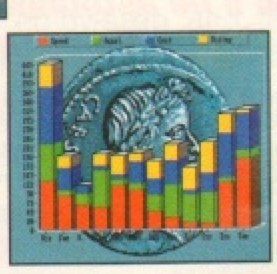
Wordprocessor: Compose a letter, check your spelling with the 50,000 word dictionary, mailmerge details from a database file, add graphics, wrap text around it, load ASCII text, highlight with bold, italic and underline... and more!



Database: Build up a versatile card index, incorporate up to 50 fields with 70 characters each, use search and replace to modify data, do powerful multi-field sorting, perform arithmetic functions... and more!



Spreadsheet: Prepare budgets or tables, alter column widths, insert or delete columns, cut and paste data, lock blocks, choose from over 50 functions... and more!



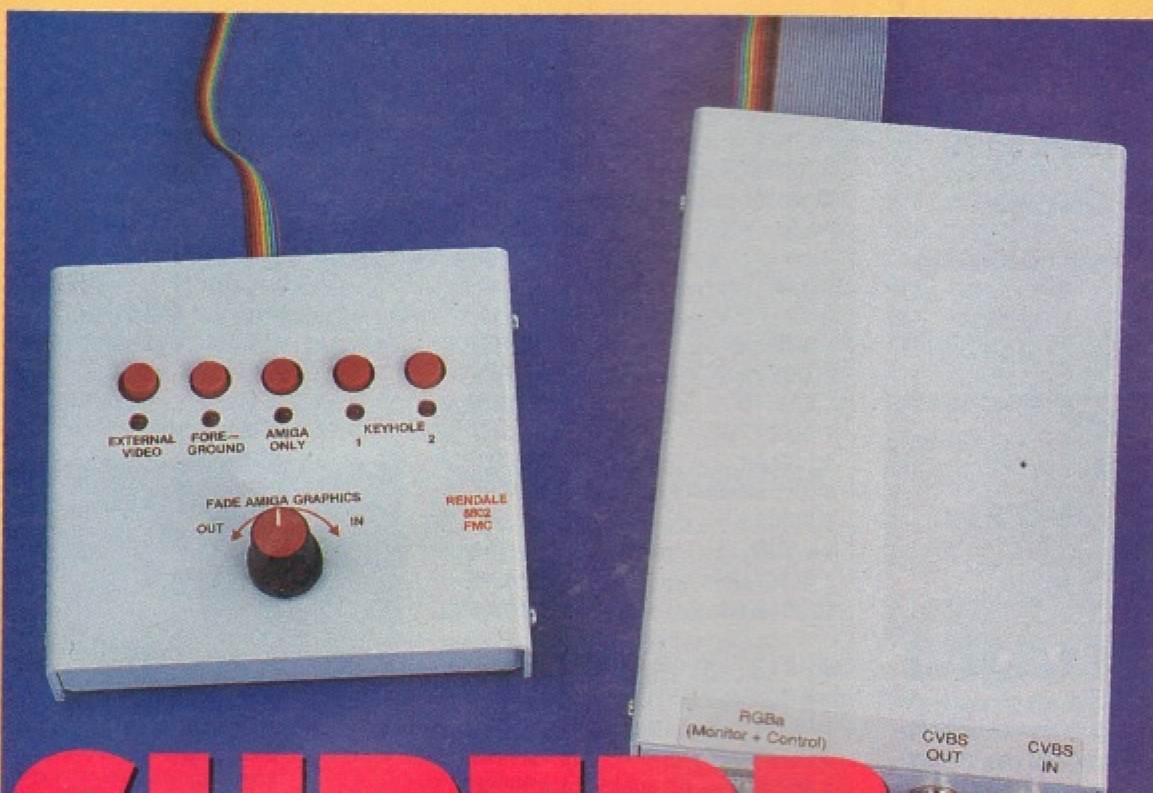
Graphics: Enter data directly or load from the spreadsheet or database; produce pie charts with exploded segments; display bar charts side by side or stacked; overlay your graphs on an imported IFF picture; add a 3D view; add text or lines... and more!



Disc Utilities: Avoid the confusion of Workbench, create bootable files, format discs, copy files from disc to disc; make directories; delete and rename files, make multiple copies of your discs... and more!

europress SOFTWARE ...always in front

WIN WIN WIN



Grabbing all the action from your favourite home movie has never been easier – provided you have a genlock, that is! Well, now's your chance to get your hands on one of the best around courtesy of Marcam Ltd., specialists in the video field.

SUPERB RENDALE 8802FMC GENLOCK UP FOR GRABS *(get it, eh?)*

The first step to setting up your own video studio is getting hold of a device that can successfully marry the world of computer graphics with live video – a genlock. And, amazingly enough, we here at CU Towers are so thoughtful that we have generously decided to let Marcam give one away absolutely free!

The Rendale features ribbon cable to detach the control unit from the actual genlock itself, meaning you can position it properly within your studio set-up. As well as the usual genlock functions to swap between Amiga graphics, video and mixed, the Rendale also offers two keyhole modes to further expand your titling potential. Two rotary controls allow you to easily fade in and out of the image, as well as adjust the mix, so that Amiga graphics can appear semi-transparent on top of the video image.

So, how can you win this marvellous device, and set about transforming your completely crap family videos into The Attack of the Maniacal Axemen from Hell? Easy, just read the four simple questions to the right, and post your answers on a postcard to: IT'S A FRAME UP, CU Amiga, 30-32 Farringdon Lane, Farringdon, London, EC1R 3AU. Closing date: 15th March, 1993.

1. Which popular TV show is produced using an Amiga, a genlock and a load of music videos?

A. MTV
B. The Chart Show
C. One Man and his Dog

2. Who is the host of TV's popular video show, 'You've Been Framed'?

A. Jeremy Beadle
B. Steve Prizeman
C. Beazlebub

3. Which port on the Amiga does a genlock normally connect to?

A. Serial port
B. Newport Pagnell
C. Video port

4. What does the SMPTE stand for?

A. Sound and Motion Picture Timing Event
B. Synchronous Music and Picture Timing Enhancer
C. Society of Motion Picture and Television Engineers

RULES OF ENTRY

1. Employees of EMAP Images and Marcam Limited are not allowed to enter the competition. So there!
2. Multiple entries will be binned. And you'll get a visit from the boys!
3. Editor's decision is final and no correspondence can be entered into. He's an extremely busy man, places to go, people to see, and he hasn't learnt to write yet.

small tips

With more tips than either a West End waiter or a municipal rubbish dump, here's CU's time-saving, effort-avoiding advice for gung-ho gamers.

STREET FIGHTER 2

The hottest game of '92 was undoubtedly this combat classic from US Gold. What could be better to go with this legendary arcade conversion than two of the mightiest cheats you could hope for.

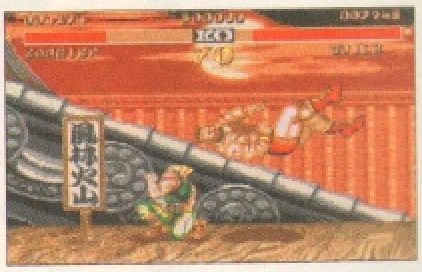
If your opponents are wiping the floor with you, how about erasing all damage from the injury bar before you get KO'ed? Start the game in one-player mode, and move to the character select screen. Position the cursor over Blanka, but don't fire to choose him. Instead, type the word 'PATIENCE'. Now, this cheat is only available if you time it right so keep a regular pace as you enter each letter: press P down, let P up, press A down, let A up, and so on, taking about as long over each letter as it takes to read those commands. The border of the screen will flash yellow as soon as the final letter E has been entered, informing you that your invincibility cheat is now in operation.

When your foes give you a pounding now, you can simply pick yourself up, brush yourself off, press F10, and start all over again. That nasty threatening red will have drained from the bar above your fighter. You'll still need to use your skills to defeat the enemy, but every time the battle swings his way just hit F10 and resume the contest free from injuries. Once activated this cheat will remain in force throughout the game.

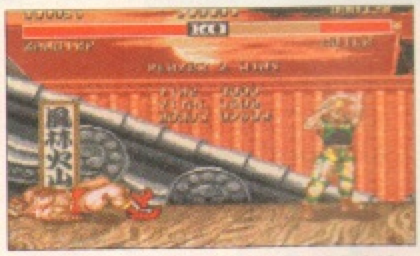


Coming to grips! The fight is on between Zangief and Guile!

A pretty nifty feature in a two-player game would be to have identical characters fight each other, wouldn't it? Start a two-player game, choose characters normally and begin fighting. During the bout press P to pause the game, then type '7KIDS', making sure that you use the figure 7 from the top row of keys, not the numeric keypad (if you've got one).



Up and over! Smart guy Guile hurls Zangief towards a hard landing.



The bigger they are, the harder they fall. A victorious Guile stands over a defeated Zangief – 'Go home and be a family man, Ruskie!'

The border will flash yellow again to indicate that the cheat is up and running. Combat resumes and you may either finish the current fight normally, or nip back to the character selection screen by pressing P to pause the action, then the Escape key. It is now possible for both players to select the same character. When they fight, Player 2's will be indicated by a helpful white arrow above his head.

If you're a really mean unsporting type you can begin a one-player game and initate the invincibility cheat as described above, then pause (P) and Escape during a fight, resuming play with two-player mode selected. Combat may now take place, with the friend you're playing against wondering why his fighter is doing such little damage to yours (although only if he's not very observant, admittedly).

BILL'S TOMATO GAME

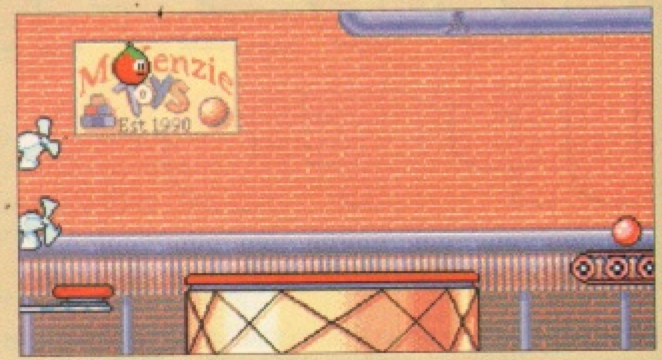
If you've been having trouble with this puzzler from Psygnosis, why not catch-up by taking the easy route through the levels. The codes you need are:

Level	World 1	World 2	World 3
1	BEGIN	TAIGGEN	BIGGAT
2	CLOACKON	PLOUMUG	SAISSIT
3	TOITTAR	PLADDAT	CLEEGOM
4	MOINON	GEELLET	DROUTTER
5	BIOKAL	TOACKIN	SLOGGET
6	MIENNAN	VOODDOM	BIELLIN
7	PLEEGGUN	BEAPET	PLIEMON
8	ZAIKET	CLYVIT	CLOIFIT
9	ZOIFCKEN	SIMAL	FLEPUG
10	SALLAR	BOOKUG	BYMAN

Level	World 4	World 5	World 6
1	SLOONNON	BOUVOM	TETTOL
2	PIOMER	DREEDDUN	GOUCKAT
3	GOOTTOG	NAIGGON	VOUPET
4	GLOUTTAN	WINNUN	CLOAVUN
5	POLLAN	GAPPIT	PASSUN
6	WOOSSOM	GLOIVUG	MOOVAL
7	SONNER	MOLLAT	FLIONNOG
8	WYNAL	SLAIVAN	CLANUN
9	SLYSSAR	PLEAPPIT	PLUMIN
10	DROAMEL	WOIDDAR	FLEASSAN

Level	World 7	World 8	World 9
1	NYMIT	FLUVON	DRAIBBEN
2	PLIOFOL	FLUGGAR	GLIAKIN
3	DREDDIN	NOUPPEL	SIAMOL
4	PLIPAR	VEAKAR	NEKOL
5	GEGIT	SLEDDON	CLIGAT
6	FLAIVIT	SLOIPOL	VUSSEN
7	FLAGGOG	TOOLLEL	PIBBEL
8	DRINNOL	MYPER	SLEAKUN
9	POIGOL	BUMET	NUPPON
10	GLUTTAT	GLEEGGAN	WOGGEL

Level	World 10
1	GAILLIT
2	CLOUGEL
3	FLICKOG
4	PLOTTIN
5	MUSSET
6	ZOALLON
7	GOAMOM
8	SOADDET
9	GLIOFAR
10	VEEFER



To kill the end of game guardian, wait until he has jumped, then jump onto his head while he is crouching.

ALIEN BREED SPECIAL EDITION 92

Thanks to Patrick Larke of Norwich for the level codes to this action-packed bug-hunting blaster. This ace top view shoot 'em up should now be a doddle to complete. To use them, just approach a computer and press the space bar to log on, before entering one of the following:

XXDFA
RTHAA
LAEEA
UYTTA
PPEAB

GRAND PRIX

Here's a way to really put the pedal to the metal and leave the opposition eating your exhaust fumes in this motor racing simulation from from Microprose. If you are in first position on the final lap, but are being chased by a rival car threatening to overtake and pip you at the post, go into the pits before he can do so. Escape from the race, then switch on the 'accelerated time' mode and your first place position is assured. If you can't win now, my name's James Hunt!

PREMIER MANAGER

To have the finest footy team in the league in Gremlin's management simulation, click on the telephone icon to reach the full-size telephone/contacts book screen. Click the following number on the telephone, '000123', to increase the passing skill of one of your midfielders to 99. His name will be changed to 'Lotus 3' in return, but you can edit that to restore his true identity. The beauty of this cheat is that it may be repeated on all midfielders, and therefore on the whole team if they all occupy midfield positions at some point.

If you can handle the thought of another cheat to make winning the cup a pushover, click the number '753423' on the telephone, and increase the goalkeeper's handling skills to 99. This cheat may also be applied to other team members, as described above.



Make someone happy with a phone call...YOURSELF! Let your fingers do the walking through CU's Yellow Pages of cheats for *Premier Manager*.

The truth will out, however, and if you use either of these cheats the name of the manager will be permanently altered to the message 'I am a cheat' (or similar). But all is not lost and deception triumphs again! Start the game with two teams. Have one improve his players with the cheats, and bear the stigma. All you now need to do is have the cheating manager sell his players to the legitimate team. Move over Leeds United, you're on your way!

TRODDLERS

If you're having trouble herding your hordes of tiny tearaways to the higher levels of Storm's enormous platformer, here are the level codes for the two-player 'War' mode (courtesy of Ivo Bos from Sevenum in Holland – thanks, Ivo):

0	BEGINNERS	20	TEAMWORK	40	NOFALLDOWN
1	ROOKIES	21	DIVIDED	41	ICEICEBABY
2	HOPALONG	22	ROCKITOUT	42	SWIFTLY
3	BRACKETS	23	CLEARAWAY	43	TAKETURNS
4	SPARKLES	24	LOOKUP	44	DELAYNPLAY
5	DOUBLEPLUS	25	ONEOFTHREE	45	FULLHOUSE
6	LONGJUMP	26	QUICKBRICK	46	TWORANKS
7	RIGHTWAY	27	FROSTY	47	TRAPANDZAP
8	TRIDENT	28	SURROUNDED	48	STAGEDOWN
9	GUIDERIGHT	29	BOOMER	49	GRANDSLIP
10	JUSTDOIT	30	SPLITUP	50	QUICKCUBES
11	ZOMBIEGO	31	TARGETS	51	WORKOUT
12	BADLAX	32	SLOWSQUARE	52	TRAXMIX
13	TIMEAROUND	33	FLAKPASS	53	HELLTRACK
14	TOOMUCH	34	THEWALL	54	GETDABLUES
15	SPLITTED	35	ROCKBOX	55	SHOOTNBLOW
16	RUSHIT	36	TWINGUNS	56	SLOWFLOW
17	MIXUP	37	GETHIMDOWN	57	COOPERATE
18	NOPANIC	38	DROPTURN	58	DENNISFAV
19	THEMACHINE	39	TUFFJOB	59	FINALE

If that lot doesn't give you the edge in by-passing obstacles, I don't know what will!

DRAGON'S LAIR III

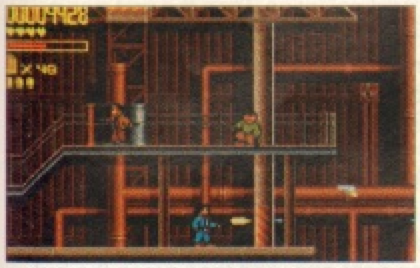
If you want to see this epic fantasy game from start to finish, type 'TIMEO' (That's a zero, rather than an 'Oh'!) on the title screen. The game will now run through without interruptions – makes a change from renting a video, anyway!

If you want to complete the game in a slightly more conventional fashion, follow these directions for each scene, as described below. Use your discretion as to the time delay to leave between each move as this varies from scene to scene – in other words, leaving a neat one or two second gap between each move will probably not be enough to see you through.

Scene	Action
1	As this is the Intro it shouldn't prove too taxing.
2	Up, Fire, Fire
3	Right
4	Fire
5	Fire
6	Left
7	Left
8	Up, Down, Fire
9	Right, Fire, Left, Fire
10	Up, Left, Right
11	Fire, Left
12	Up, Right
13	Left, Fire



Details of how to overcome the next 14 scenes will appear in next month's issue.



For that unfair advantage all serious gamers need, why not just skip over the baddie-filled levels in Ocean's *Lethal Weapon*!

LETHAL WEAPON

For swifter shoot 'em up action in Ocean's cop caper based on the films of the same name, why not skip some levels? Hold down the Alt and F keys simultaneously. The numbers on the numeric keypad will now whisk you to the corresponding stage of the game.

MAGIC LAND DIZZY

If you're in a spin keeping your egghead hero intact, type 'DIAMONDS AND PEARLS' for infinite lives.

TOP TIPS PLEASE

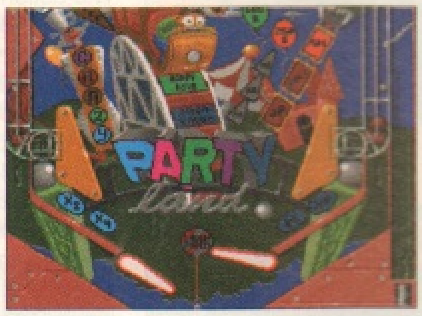
If you have any helpful hints or titanic tips which you would like to share with CU and your fellow game players, feel free to send them in. The senders of the first-class cheats we use are rewarded with a game.

- If you want to receive a game, rather than just our thanks, remember that the more up-to-date the game the cheat is for, and the larger the number of cheats you send, the higher your chances of success.
- Don't expect a slap on the back for sending us cheats which have previously been printed in other magazines, broadcast on television, or made generally available in other ways: the chances are we'll know them already!

The address to send top quality cheats to is: Small Tips, CU Amiga, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.

PINBALL FANTASIES

To be a real pinball wizard (platform shoes optional), before choosing the number of players type 'EXTRA BALLS' to have five more balls available. To keep the game going indefinitely enter 'DIGITAL ILLUSIONS': during play the ball will come to a halt between the flippers. Press the space bar to resume play. After these cheats have been initiated, a message should appear on the scoreboard to let you know they are in operation.



No more need to flip out! Use the cheat which gives you more balls (oo-er)!

ROAD RASH

If you were born to be wild (not to say furious), these passwords will help you get astride the more beefier bikes in Electronic Arts' rough and ready racing gam.

PANDA 600	00000 00J00 102VS 21JUD
BANZAI 750	00000 00J01 113BT 22KDP
BANZAI 750	00000 00R00 013VS 32RV4
KAMIKAZE 750	00000 00S20 117H5 33UV1
SHURIKEN 1000	00000 01421 109G5 448VN
FERRUCI 850	00000 01420 019G5 457VO
PANDA 750	00000 01S91 00EGJ 567HM
DIABLO 1000	00000 01S90 10EGJ 576IK

SENSIBLE SOCCER

To beat the computer opponent in the classic footy game, whether playing league or cup matches, do the following:

When your match appears next on the fixtures screen, for example England (YOU) v Germany (THE OPPOSITION), instead of selecting 'Next Match' click on 'Exit'. Now choose 'Friendly' from the main menu and select Germany as your team. Go to the 'Team/Formations Screen' and put all the German star players on the bench, put the forward in goal, and generally mess about with the original team selection. Now start to play the game, but escape from it as soon as it begins.

Return to the League/Cup games and 'View Opposition' (Germany). Hey Presto! Your opponents' team remains thoroughly mucked-up and in no state to play at its best.

Thanks to N.J. Powell of Tupsley, Hereford, for this corker of a cheat.

WWF2

Camper than a row of tents, the over-made-up, leotard-loving wrestlers of WWF continue their brawling in Ocean's in-the-ring action game. To defeat the opposing computer-controlled team press F10 ten times to freeze them in their tracks. You may hit them at will, but try not to knock them over as you won't be able to pick them up again. Repeat this process with each subsequent bout.

INDIANA J
AND THE FATE OF AT

If your designer-stubbled, sweaty-shirted, leather-jacketed archaeologist has been digging in the dirt without success, here's your chance to help Indy get the goods in US Gold's graphic adventure. Whipcrack away!

STATUE SEARCHING

Starting at the very beginning (a very fine place to start), Indy should get out of the first room in Barnett College by clicking on the odd statue to the left of the screen. It's not the statue he's looking for, so keep going. In the room below the attic, click on the rope beside the hole toward the right of the scene. Finding himself in the library, Indy should locate the books whose titles refer to statues and click on them. Having then entered the room beneath the library, Indy should click on the far right statuette of the cat. Now, in the boiler room, Indy is getting warmer as his first task nears completion. Click on the lockers to the right, and the one which contains the statue Indy is after will soon open up. Click on the statue to enable Indy to swipe it.

Outside the theatre in New York, Indy's choice of how he gets in to see Sophia marks the beginning of the three possible ways of solving problems in the game – the Team, Wits, and Fists paths. Although you aren't offered the choice of path at this stage, how Indy gets past the doorman determines which course will be suggested to him later on. The way of solving problems explained here assumes that you will opt for the Team Path – the text in the boxes shows how to cope with the challenges and solutions of the other paths, where different. Whichever path is going to be chosen, it will be as well for Indy to pick up the newspaper from the stand before progressing further.

Indy can talk his way past the bouncer by using the first suggested sentence, followed by the second from the next selection, then the first again, and the third option from the next two selections – what a lot of rabbit! Once inside, wait until Sophia has explained about the spirit guiding her before trying to distract the stagehand. To do this, use the third piece of dialogue on offer, followed by the first choice from the next two selections. Now hand the stagehand the newspaper. To grab Sophia's attention, send Indy to the machine, push the left lever, followed by the right one, and then press the button to send the prop representing the spirit of Nur-Ab-Sal. This will sail onto the stage and, believe me, Sophia will certainly notice it.

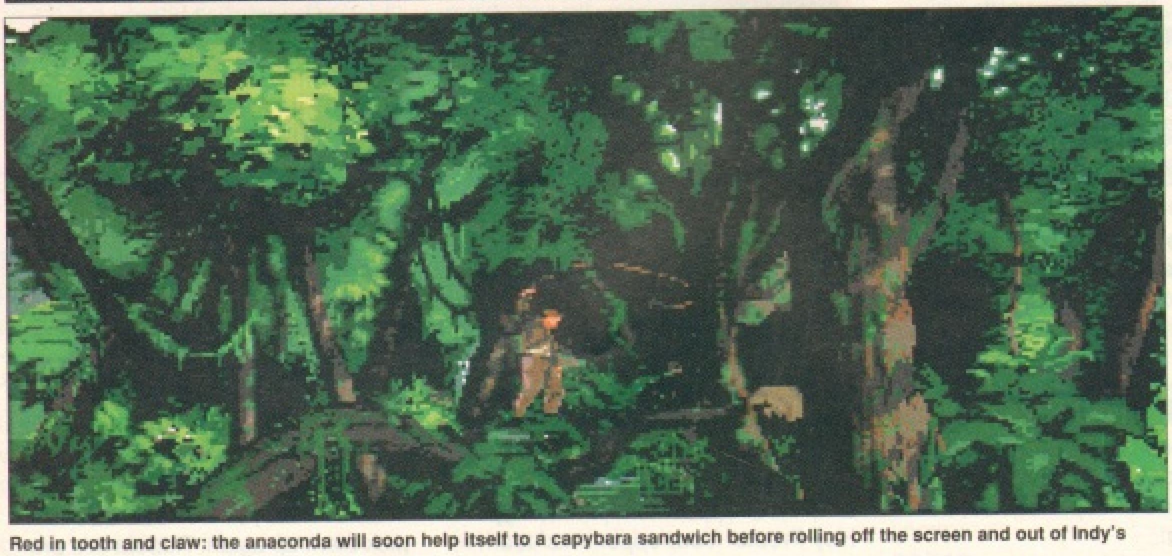
GETTING CHILLY

The action moves swiftly to Iceland. When speaking to Dr Bjorn Heimdall, Indy should use the third choice from the first two selections of dialogue, followed by the first option from the third one. Indy will learn of Sternhart and Costa from Heimdall – two more people he needs to meet. On the first visit to Iceland it is not possible to get at the ice-covered statuette: on subsequent visits a head shaped like that of an eel will be visible. Place orichalcum in it.

In Tikal, enter the command 'Use whip with jungle rodent and, with a flick of his thong, Indy will startle the little critter into action. Drive it to the path at the back of the screen, in the middle, and watch the deadly anaconda leave its tree to nab it. Now is Indy's chance – click on the tree at the side of the gorge, and watch him cross with ease!

Indy lashes up a solution to passing the anaconda outside the forest. Whip that unlucky rodent until it runs along the dark path leading out of the jungle, toward the chasm.





Red in tooth and claw: the anaconda will soon help itself to a capybara sandwich before rolling off the screen and out of Indy's way.



Having outsmarted the deadly reptile, Indy must use a little lateral thinking to cross the chasm. Tree fellers aren't required – one is enough! Have Indy use the tree and the solution to crossing the chasm will soon drop into place. Easy as falling off a log! Indy lands on terra firma (firma than the tree anyway). Having solved this precarious problem, Indy is safe to carry on to the next puzzle.

JONES
TLANTIS PART 1

To get past Sternhart, and into the temple, have a chat with the parrot. Say 'Title?' to it, and it will tell you what you need to know to convince Sternhart to let you in. Once inside, Indy will find that the spiral pattern in the middle of the temple is an object which may be picked up – even though it's a bit dirty. Ask Sophia to keep Sternhart talking. While she distracts him, Indy can sneak out to Sternhart's stall and snatch the kerosene lamp. Take the lamp back inside and use the kerosene to polish up the artefact – be sure to open the lamp before trying to use it with the spiral design. Now Indy may remove the spiral and use it with the animal head on the wall to the left of the screen. After an elephant's head has been constructed, pull the creature's nose to open a secret tomb. Don't waste time chasing Sternhart when he steals Indy's goodies and flees, make a thorough search of the tomb in case he overlooked something useful (like a nugget of orichalcum).

WARMING UP

Indy and Sophia now head not for the Azores, but back to Iceland. It will be necessary to obtain Heimdall's eel statuette in order to chat with Costa. Finding Heimdall dead, drop the orichalcum on the eel's head (as mentioned earlier), then head south for the Azores. Let Sophia do the talking, if necessary, and bribe Costa with the figurine. Costa will reveal that Plato's Lost Dialogue (translated by Sternhart) is kept in the Ashkenazy Collection which, by a remarkable coincidence, is located in Barnett College.

Back at Barnett, begin by sending Indy to his office, opposite the college entrance. Look in the

THE WITS PATH

When entering the theatre, don't waste time on the doorman, have Indy push the crates in the alleyway until the path to the fire escape has been cleared.

Trottier will give Indy his business card once our hero has provided the correct answer to his question. Ensure that Trottier heeds the warnings about a trap by persistently talking until he takes Indy seriously.

When the Nazis speed off, ram their red car – more than once if necessary. They shall not pass (as they say)! To find the intersection mentioned by Trottier, bear in mind that the streets are named alphabetically, left to right and bottom to top. Look at the signs by the intersections until you've found the one Indy needs.

When the right crossroads has been found, look in the drain, then open it and pick up the Sunstone contained within.

THE FISTS PATH

Why should Indy waste time trying to talk his way past the doorman? Beat him up instead! A sucker punch should certainly work, though not very noble.

After Alain Trottier's question has been answered correctly, he will give Indy his business card – hang onto it for future reference.





The middle spiral design on the first column, in Sternhart's closely guarded temple, conceals a secret. Unfortunately it's been corroded into position. What can Indy possibly use to clean it up?

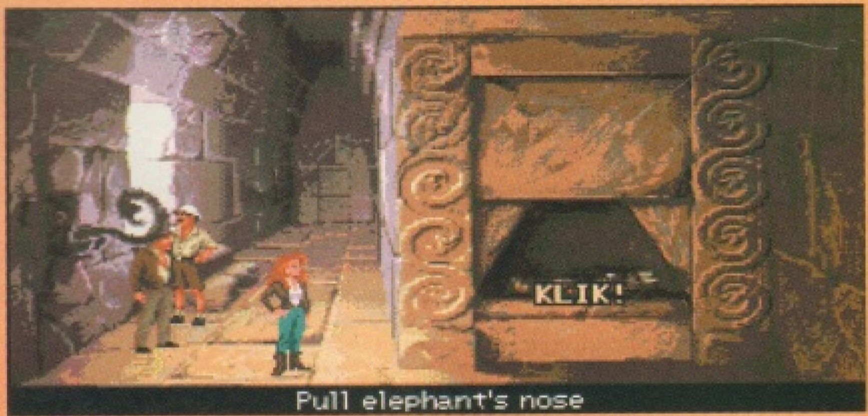
Strike a light! While Sophia chews the fat with Sternhart, Indy swipes his kerosene lamp.



A genie won't appear if Indy rubs the lamp, but if he opens it up and applies the kerosene to the spiral, he'll be able to prise it free. Indy instinctively knows that it's a nose for the animal head on the left wall.



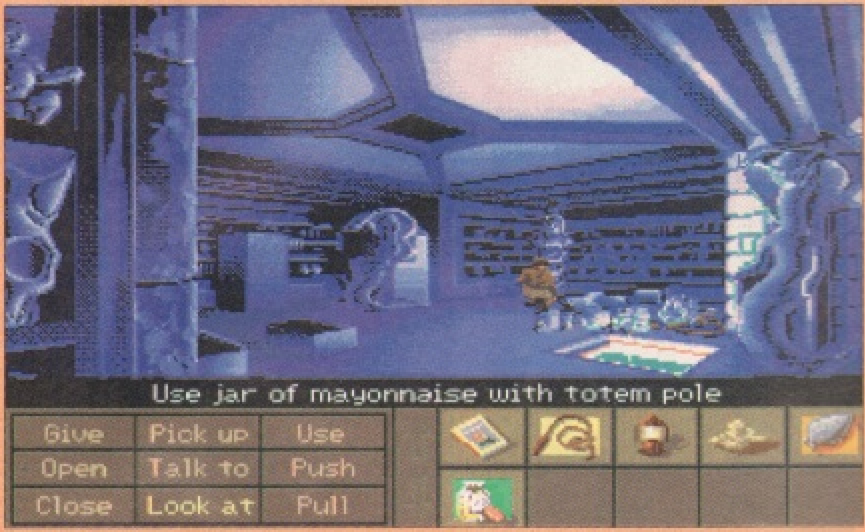
Mumbo jumbo? An elephantine puzzle has been solved by our hero – almost.



Open sesame – a tug of the trunk and the tomb opens. Quick-fingered Sternhart will help himself to the contents, but a bead of orichalcum will remain for Indy to pocket.



Dr Jones hanging around the library again: you can't keep him away from those books.



A picnic – Indiana Jones style. Mayonnaise and gum from an old school desk, lovely. Just add mayo to the totem pole and drag around like the galloping gourmet.



Up, up, and away! Indy's archaeological career climbs ever higher.

ice box and pick up the jar of manky mayonnaise (it'll take two attempts, but Indy will do it if you persist), and return to the college. There are three possible hiding places for Plato's Lost Dialogue: finding any of these requires the acquisition of tools from more than one room. To start with, go up the stairs to the library. Take the gum from the school desk, then climb the rope to the dark room above. Smear the totem pole with the mayonnaise (Honestly!), and, thus lubricated, it may be pulled under the open trapdoor to the attic. Climb up the totem pole. Once in the attic, open the urn sitting on the floor and pick up the ashes. Indy will find a key amongst the ashes which he should take (As if he'd leave it behind!).

Climb back down to the totem pole room, push the big crate out of the way, and unlock the dusty chest concealed behind it. The Dialogue may well be inside. If it isn't, pick up the arrowhead to be found in this room, before returning to the lobby. Go downstairs to the boiler room, use the gum with the coal chute (to make it sticky enough to climb), and go up. Locate the cat-like wax figurine, return to the boiler room and open the furnace door. Use the wax figurine with the furnace and see what emerges…

SPEAKING IN TONGUES

If Indy still hasn't got hold of the Dialogue, pick up a piece of coal and the dirty rag before leaving the cellar. Head for the library and make a DIY screwdriver from the rag and the arrowhead. Remove the five screws from the overturned bookcase and Plato's finest work should finally be within Indy's grasp. If you don't consider yourself a handyman, rather than dismembering the bookcase the Dialogue may be knocked down from beneath with the lump of coal.

Indy may now go back to the office to tell Sophia of his success before leaving (together for the Team path) to catch the clipper for Monte Carlo. In Monte, hang around outside the hotel until Alain Trottier turns up. You can't miss him: Trottier has grey hair and a beak-like nose. He is wearing a brown suit with a flower in the lapel. Once Indy has identified and accosted Trottier, use the first sentence option. Follow up with the second, first, then third sentences from the next three selections. The answer to Trottier's question is contained within Plato's Lost Dialogue: after giving it, use the second sentence option, followed by the first, and Trottier will follow Indy.

NEXT MONTH

The second part of this complete play-through will return next issue. In the upcoming installment Indy learns about Sunstones and spark plugs, Moonstones and murals, labyrinths, submarines, balloons, camels, and lots of Nazis.





Eureka! Indy's found it! Plato's Lost Dialogue found in a dust-covered chest.
Around the World in 80 Days! Michael Palin will get jealous if Indy does much more travelling. One of his more straightforward journeys is going straight from New York to Monte Carlo after finding the Hermocrates.


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STREET FI

With the recent release of the most eagerly awaited game on the planet, Steve Keen gets to grips with the fighting fest's eight principle characters and spills the beans on who you'll be taking on over the next few months. Along with the 12 different combat locations around the world come a dozen of the hardest-hitting, fastest-killing hombres this side of the beat'em up arena. You're going to need all your cunning, all your stamina and every part of our guide to stay alive to the end. So flick through our first instalment and let us introduce you to the main men on the street fighting circuit.

NAME: E. HONDA

Age: 33 Height: 6'2"
Weight: 304lbs

Like a genetically engineered battery bull, Honda has been worked, trained, fed and conditioned from birth with the sole purpose of becoming the undisputed King of the Sumo ring. After obtaining the title 'Yokuzuma' (Grand Champion) at the early age of 21, the man mountain has never lost inside the wrestling arena. The Jap giant has repeatedly obliterated his country's top contestants year after year and has now stepped into the Street Fighter Tournament to prove that his fighting skills are unprecedented. Naturally, he thinks Sumo is the greatest combat art in the world and anyone who takes him on will find out just how effective it is – first hand!

Advantages: Incredible strength and defensive moves. Considerable speed of limb movement on selective attacks.

Disadvantages: Slow on the ground and in the air. Very vulnerable to leg and head attacks.

Special Moves: Hundred Hand Slap and Sumo Head Butt.



NAME: BLANKA

Age: 27 Height: 6'5' Weight: 218lbs

One of the most feared beasts to have ever entered the contest due to his bizarre appearance and a history shrouded in mystery. Blanka, as he has become known, is rumoured to have scavenged an existence for himself in the South American jungle regions after being the sole survivor of an air crash in that region when he was an infant. He has managed to build up an incredible physique by lifting tree trunks and using his huge arms to swing from tree to tree. The boy was mutated in a strange accident and as a result, with his meticulous study of electric eels, he has managed to emit huge pulses of electricity from his body at will.

Advantages: An extremely long reach coupled with some awesome close quarter attack moves means that he can inflict massive amounts of damage with the minimum of hits very quickly.

Disadvantages: Slow to retreat when in trouble and easily dispatched if caught by a projectile mid special move.

Special Moves: Electric Shock and Rolling Attack.



NAME: RYU

Age: 27 Weight: 150lbs Height: 5'10"

Ryu is the Japanese battler from the streets of Hong Kong. He is an extremely calculated fighting machine who has spent his life under the guidance of Master Sheng Long, who raised the man as his own son. Ryu is already an accomplished fighter and a Master in his own right, but he lacks the discipline and concentration needed to make him an invincible champion. Eager to prove his worth in combat the youngster often gets carried away in the thick of the action and makes costly mistakes, but he improves with every fight.

Advantages: Great versatility of attacks with some amazing combinations. Like Ken he's a fantastic all rounder.

Disadvantages: Can be a bit predictable if you get stuck with some techniques at the beginning of your street fighting career!

Special Moves: Dragon Punch, Hurricane Kick and Fire Ball.



GHTER 2



NAME: GUILE

Age: 33 Height: 6'1" Weight: 191lbs

Guile's an ex-Special Forces commando. He is driven by rage and thoughts of revenge against the evil tyrant M. Bison. He has built up his body lifting weights and honed his fighting techniques to lightning fast proportions. Whilst stationed at a military air base he became a pilot. Due to his knowledge about planes he can control the sound waves given off by the mac-speed flying aircraft and can incorporate their speed and power into some of his attacks.

Advantages: Very strong and incredibly fast on the attack. He often gets two or more attacks in to an opponent's one.

Disadvantages: Precision joystick movement and timing are required for success. He occasionally misses an attack totally, leaving himself vulnerable.

Special Moves: Sonic Kick and Sonic Boom.



NAME: KEN

Age: 28 Height: 5'10 Weight: 169lbs

Ken trained under the same Master as Ryu, but being American he believes that he is the stronger of the two fighters. After the first Street Fighter Tournament Ken decided to hit the beaches and relax with his girlfriend to get away from it all but now he's eager to get back to the blood and sweat of the ring. His incredible ego is fuelled by a desire to recapture the fighting crown and luckily for him he can back up his enormous boasts with awesome fighting skills. Although the two Shen Long students studied under the same teacher they have only ever met inside the ring and each is fiercely competitive so don't expect any favours from either of them!

Advantages: Ken has developed far superior throwing techniques to any of the other characters and is very fast when stuck in close.

Disadvantages: Can be caught short when an attack fails.

Special Moves: Dragon Punch, Hurricane Kick and Fire Ball.



NAME: ZANGIEF

Age: 37 Height: 7' Weight: 256lbs

Zangief is the token wrestler of the show. He's a Russian bruiser who's trained for this years Street Fighter competition in the frozen wastes of Siberia by wrestling grizzly bears. His severely battle scarred body is covered in blood red streaks from his furry encounters, but he believes that this will strike even more fear into the hearts of his opponents. Standing an incredible seven feet tall he's managed to fund his entire bid for the title with the USSR's government money.

Advantages: Awesome crushing techniques and bone busting holds.

Disadvantages: Easily defeated by any fighter worth his salt. He hates high attacks.

Special Moves: Spinning Pile Driver and Spinning Clothes Line.



NAME: CHUN LI

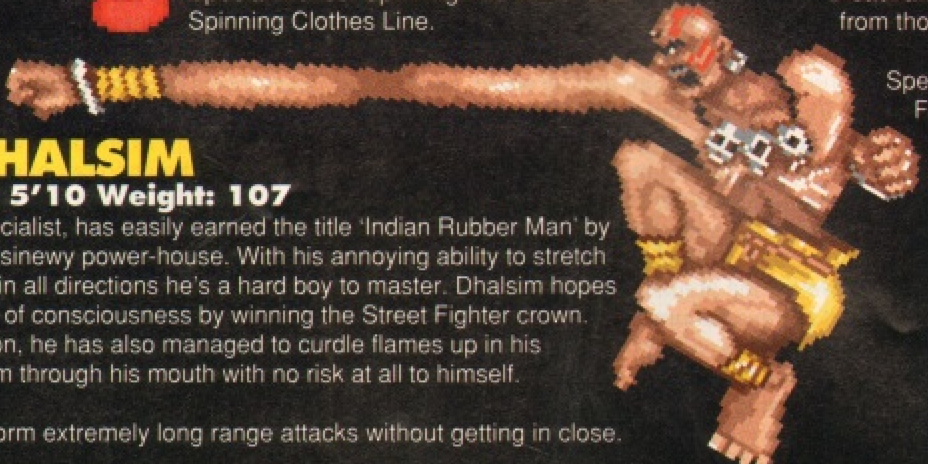
Age: Unknown Height: 5'8" Weight: Unknown

Chun Li believes the man who murdered her father has entered the Street Fighter Tournament. Being the only woman in the contest she is certain that it will not be too long before the criminal notices her and she can get close enough to exact her revenge. Chun Li has mastered the Wushu martial art and feels that no man can ever be her equal inside the ring.

Advantages: Lightning fast attacks and incredible acrobatics make the girl one of the most deadly characters of them all.

Disadvantages: Very vulnerable to upper-cuts and punches from those who can give them. Limited attack patterns.

Special Moves: Spinning Bird Kick and Hundred Foot Kick.



NAME: DHALSIM

Age: 41 Height: 5'10 Weight: 107

Dhalsim, the Yoga specialist, has easily earned the title 'Indian Rubber Man' by turning his body into a sinewy power-house. With his annoying ability to stretch and contract his limbs in all directions he's a hard boy to master. Dhalsim hopes to reach a higher state of consciousness by winning the Street Fighter crown. By mastering meditation, he has also managed to curdle flames up in his stomach and blow them through his mouth with no risk at all to himself.

Advantages: Can perform extremely long range attacks without getting in close.

Disadvantages: With outstretched limbs he is vulnerable to an attack. He's very slow in the air.

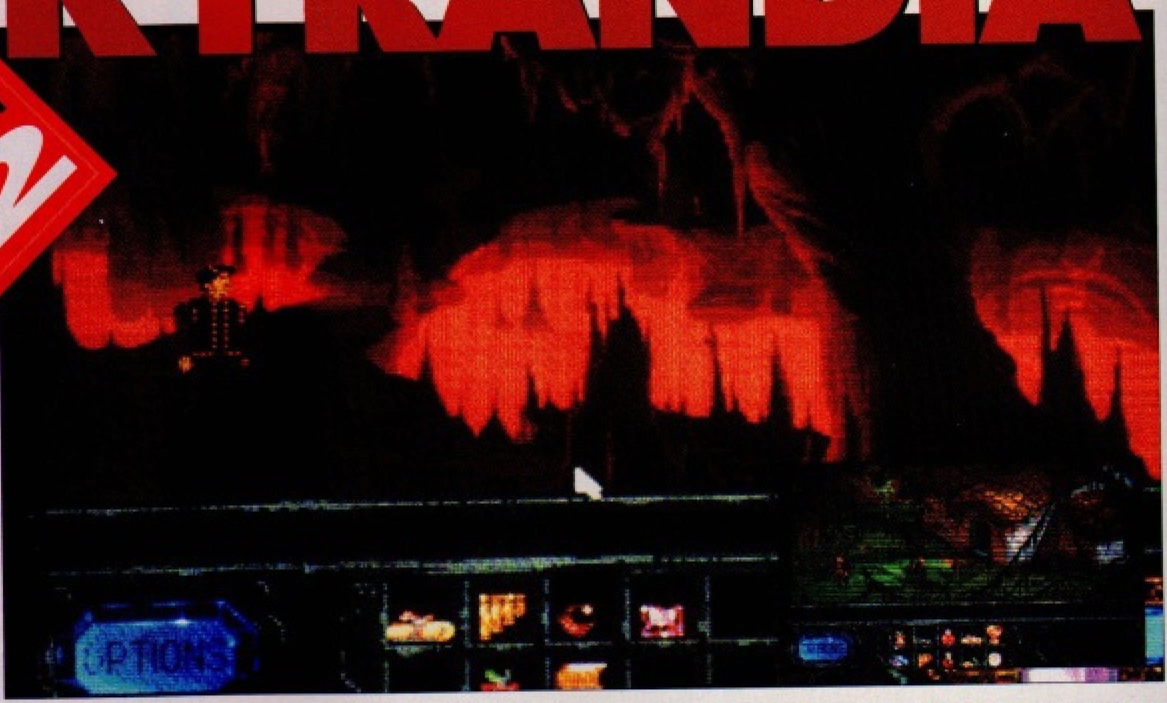
Special Moves: Yoga Flame and Yoga Fire.

Having sparked your interest with this liitle taster to the action, Steve will return next month with more details on how to carry out all the moves and which ones to use against the various battlers. Till then, keep pounding the joystick.

THE LEGEND OF KYRANDIA

If you're still stuck in Virgin's great graphic adventure, here's the final part of our complete play through. Steve Prizeman is your amiable guide.

PART 2



Don't get get hot under the collar by trying to cross this hot stream before freezing it with the scroll.

ZZanthia's abode is not as safe as it may seem. Danger lurks in the most unlikely of places – save the game before taking a closer look at those cute amphibian eyes.

AND NEXT...

In Part One of this complete play through you were helped with the first two sections and given a start on the third one. By now you have made major inroads into the quest to free Kyrandia from Malcolm's evil grip. Brandon has met Brynn and healed the forest altar. After crossing into the Timbermist Woods, Darm should have guided Brandon to the first amulet gem and given him a magical freezing scroll. The Shadowrealm was the next, and possibly most dangerous, section to complete with instant death lurking in every cave. With this conquered, the purple gem should be switched on and Brandon free to explore Faeriewood. After meeting Zanthia and fixing the vandalised fountain, our hero will have found Zanthia gone and a trapdoor to a whole new section hidden in her abode. On with the story...

FLOWER POWER

Brandon has now reached the point at which he should gather as many flowers and gems as cross his path, as these are useful ingredients for potion-making back at Zanthia's. Pick some orchids, then head back to the alchemist's place. If he has sufficient ingredients, Brandon may as well begin making potions as soon as he arrives. Here's how:

- For a red potion put an orchid and a ruby in the cauldron.
- To make a blue potion add a blueberry to a sapphire.
- A tulip and a topaz or emerald will produce a yellow potion.

The rule of thumb in potion making is that a gem and a flower of the same colour added together will make a potion of that colour (this doesn't work with purple-coloured ingredients, however).

To become a wiz at mixing (and I don't mean by becoming a DJ), send Brandon back through the trapdoor, then down, down again, left, down, down, right, and up. Our hero will now find the Crystals of Alchemy, which permit the creation of particularly handy potions from the potions of the basic colours. Pour a red potion into one of the Crystals' slots, and a yellow potion in another to produce an orange potion. For a purple potion, add a blue potion to a red one. The addition of a yellow potion to a blue one will result in a toxic green liquid – so handle with care (or at least don't drink it).

Return to the magic fountain, then leave the screen by going down. The Royal Chalice may now be seen, floating in the air nearby. To lower it, Brandon needs to activate the amulet's blue jewel. Brandon will then have to be quick on his toes, and chase the faun which will immediately run by and seize the chalice. Pursue it to its diminutive house (exit screen right), and take a purple potion to make Brandon small enough to go inside. The faun will happily swap the chalice for an apple, but nothing else. Brandon has had the opportunity to pick up several apples en route (he may even have the one he started with) so this shouldn't be a problem. If he has been prodigal with the pippins, one may be found near Zanthia's home.

Now with the chalice, Brandon ought to head back to the shores of the lagoon, take the orange potion, and be utterly gobsmacked to find himself transformed into a flying horse which can wing its way across the waves to Castle Kyrandia. It is essential that Brandon has the following items with him before taking flight: a flower, the Royal Chalice, and (naturally enough) the key of the castle.

CASTLE KYRANDIA

Having reached the far side of the lagoon, Brandon need only exit to the right to find himself beside the grave of his parents. Placing a flower upon the grave will summon the ghost of Brandon's mother, who will advise her son that he needs the Royal Chalice (as if he didn't already know). Brandon's mum will then imbue the red gem of the amulet with the power to make him invisible for a short spell. Brandon should go right, and then up. To get past the gargoyle-guarded gate and into the castle, he must become invisible then use the key to unlock it. Brandon may now go up (into the castle) and find himself at the foot of a staircase. Paying no attention to Malcolm's house rules, turn left, then go up, and up again, into the library. The fireplace conceals a secret passage, move close to it and trigger the mechanism so that Brandon will be carried by it when it turns around.

Brandon will now be in the catacombs. Go left, left, up, up, left, up, and then right to find the path blocked by a force field. Neutralise this with the blue jewel on the amulet, then go up, and right. In this part of the catacombs a golden key is concealed beneath a rock on the ground. If Brandon waits until the amulet has recovered sufficient power for him to switch on his will-o-wisp ability, this will make the rock easier to find. Having returned to the library, Brandon should pull books from the shelves in such an order that the first letters of their titles spell the word 'OPEN'. The fireplace will now turn to reveal its rear side, on which rests the royal crown.

With the crown, Brandon should go right, into the Great Hall, right again, and right once more, into the kitchen. With the sceptre which can be found here, Brandon should return to the foot of the stairs and ascend them. At the top of the stairs, turn left, go up, then turn left again to enter the music room. Before he can get into the room, however, Brandon will find himself face to face with a saw-wielding Herman, now under the malign magical influence of Malcolm. Brandon should maintain a safe distance until he puts Herman to sleep with the yellow amulet gem. Once inside the music room, Brandon should ring a peel of bells in the following order: bottom bell, top, second from top, second from bottom. Another gold key will now appear behind a picture.

COME UPPANCE

Brandon's quest is nearly at an end. Send him downstairs, back to the Great Hall, then up, unlocking the door of the Royal Foyer with the two gold keys. In the foyer, Brandon should place the sceptre on the crimson cushions in the alcove to the left; place the crown in the centre alcove, and the chalice in the one on the right. The door to the Kyragem's chamber will now open. Malcolm will appear and insult Brandon, who will jar the jester with a punch. Brandon now needs to turn right and enter the chamber of the Kyragem. When he's inside he should hurry to the mirror on the right of the room, stand in front, and use the red jewel on the amulet once more to become invisible. Hot on Brandon's heels will come Malcolm who, enraged, will cast a petrifying spell into the room. The effects of the magic ought to be reflected by the mirror and turn the jester to stone instead of our hero. With the motley mischief-maker getting his come uppance, Brandon's quest is completed and joy (but not jesters) may be unconfined across Kyrandia.



the TROLL'S HEAD

and ADVENTURE HELPLINE

Welcome, weary traveller, to the Troll's Head Inn. Inside these warm walls you can read the Heroes Wanted Board to find out about the latest quest; and off in the back room lies the Shrine of Knowledge, the font of all wisdom for puzzled adventurers.



A plethora of doors block further progress for your party of adventurers in *Eye of the Beholder II*. Although most require a key, some can be opened by a swift chop from a battleaxe, alternatively, take a thief with you to pick the lock.



Fortunately, a little extra exploration may reveal a transporter or two hidden around the corner. Be careful, though, as some can take you to levels containing monsters which are too powerful for your party to defeat yet.

RULES OF THE INN

1. Please do not feed gnomes to the Grue, it only encourages him.
2. Owing to last week's 'unpleasantness', the Boar Casserole will now be served without Mandrake Root!

Today's Exchange Rate – 10 Zorkmits to the Groat.

By Order of: The Inn Keeper.

HEROES WANTED BOARD

THE LEGEND OF KYRANDIA

Heroes are required to save the Kingdom of Kyrandia from a mad jester called Malcolm. (Well you'd be mad too if that was your name.) Intrepid heroes take the part of Brandon, a dethroned prince, in his quest to save his Grandfather and the rest of the kingdom from Malcolm's evil plans. This is a particularly beautiful kingdom with precious stones dripping from every nook and cranny. Many of the problems involve finding items which are hidden in strange places and combining them with other items to create weird and wonderful magic, so bring lots of Optrex to ease your blood-shot eyes. Nothing is left to the imagination as strange creatures appear to prey on the hapless hero. This quest does not involve tortuous logic puzzles, simply a grim determination to succeed will suffice. It is unlikely that this quest will never be the legend that its name implies, but it will be as popular as hot rubies.



Magical talking trees and petrified old wizards give you an inkling of what to expect in the *Legend of Kyrandia*. As this game comes from the creators of the excellent *Eye of the Beholder* you can be sure that whatever awaits you will be worth seeing.

THE SHRINE OF KNOWLEDGE

Away from the noise and laughter which fills the bar, there is a shady corner where a red, velvet curtain shields the Shrine of Knowledge. It is to here that the humble and the penitent come to seek help with those quests which have brought them to their knees. Draw near and listen, so that you too may profit from the Font of all Wisdom...

EYE OF THE BEHOLDER II

Per Langerud from the frozen wastes of Norway has waited for months to get an answer to his problem in *Eye of the Beholder II*, but it seems that everyone has passed this puzzle except him. So he has finally put pen to paper in order to continue his wanderings in the dark and horrifying corridors of the Silver Tower.

Having fought his way past the Mantis warriors and huge bee swarms, he has reached a level where there are four switches on two opposite walls. The switches control a number of doors out of this room, but they also open up pits below the other wall switches. There is a sign on the wall in this room which reads, 'Faith is the answer'. He has tried several different combinations in the room but nothing has helped. There is always one door left which he can't open. He has promised to buy CU Amiga until he is 85 years old if the Shrine can help him.

The Shrine replies: You don't mention how old you are. No doubt you are 84 years old already! I found this puzzle very satisfying to solve. It was easy, but neat. No doubt you have found that it is possible to open all of the doors in the corridor except the last one and you cannot get at the final switch for a pit has opened up in front of it. If you search the corridor which has been opened up you will find a secret wall switch (shaped like a brick). Press this switch and return to the room of the switches and stand before the final pit. Now we come to the test of your faith. Did you see the Indiana Jones film – The Last Crusade? If you did, you will recall that one of the puzzles Indy had to solve was the Test of Faith. At this point he stood on a ledge above a huge chasm, and as a test of his courage and faith he had to step off the ledge and into mid-air. Luckily for him it was all an illusion for there was an invisible bridge across the gap. Need I say more? A subscription form to CU Amiga is on its way to you!

KNIGHTMARE

Having answered his last prayer, the Shrine helped Andrew Freshwater complete the Quest for the Shield in *Knightmare*, but alas he still does not know how to get past the Tree Guardian and get into the Quest of the Sword. He has hurled the kitchen knife at all of the three remaining guards, but nothing happens. Which guardian does he throw it at?

The Shrine replies: Hmm... I can see you are going to be a regular. Perhaps you should speak to the Innkeeper and buy a season ticket for the Shrine. After the Shield quest you should be setting off on the Quest for the Cup of Life. It is no use throwing kitchen knives at the trees. The object which you throw at the tree guard is the object which you found in your last quest. Hence, in this case, the shield. A word of warning. Make sure that your strongest warrior throws the shield or it won't destroy the guard. After the Cup quest you will be ready for the Quest for the Sword, and then the Quest for the Crown.

ELVIRA II

Philip Coles from Chelmsford needs help with *Elvira II*. How does he get the priest to draw a pentacle of blood in the car park? He also has a problem when he asks the Indian Chief to bless the weapons. He says, 'Bring me all magic'. What does he mean?

The Shrine replies: If you want the priest to draw the pentacle I suggest you ask him! I don't recall that there was any problem with this. You simply tell him that you need help. Perhaps you haven't solved all of the other problems yet. At this point you should have: Binding Scroll and rope, 10

black candles, magic bag, tomahawk, war lance, chalice of blood, matches, peace pipe. To create the Resurrect Spell you should also have: brain, heart, scalp, eggs and prayer book. You should give the peace pipe to the Indian. Go to the parking lot and lay out the 10 candles. Light the candles then use the magic bag to summon the demon. Throw the Blind Demon spell. Once the fireworks have disappeared, throw the lance. Now throw the tomahawk at his heart.

WONDERLAND AND LEISURE SUIT LARRY II

Andrew Walker from Wolverhampton has written to say he is 'well stuck' in *Wonderland*. He has spent all of his free time over the last three weeks racking his brain on how to solve this problem. He is in the Palace Observatory, standing on a tea chest next to a telescope. His aim is to look through the telescope, but this is easier said than done. The game's help facility advises him to obtain lenses and fix them to the telescope (FIX being the operative word). He has both lenses in his possession and has tried the word 'fix' and every other associated word, that both he and the rest of his family and work colleagues can think of, to FIX the blasted lenses, but none of them work.

In *Leisure Suit Larry II*, Andrew has guided Larry to the lifeboat and wants to know where he gets the food that Larry will need on the journey. He believes pizza is mentioned but can't find any.

The Shrine replies: I'm not sure if I can help you here. I certainly remember what must be done, but I don't recall the exact commands. The best I can do is tell you what needs to be done in the Observatory and trust it helps. By using the tea chest, you will now be tall enough to reach the telescope. To do this, put the tea chest down and then stand on it. Put the large lens into the large end and the small lens into the small end. Close your left eye for a better view. Now move the telescope towards the SouthEast until you see the tree house. You should be able to see a card hanging on a nail. Before you leave the Palace, go to the Eastern Hall and get your boots. Then leave through the cellar.

As for supplying Larry with emergency rations, there is no need to do anything about that. Providing you enter the lifeboat with everything you need you will be automatically transported to the next stage of the game. What you should have at this point is a wig from the barbers, some sun-oil from the drug-store, some poisoned dip from the bar, the bikini top from the bottom of the swimming pool, fruit and the sewing kit from the cabin next door. As soon as the lifeboat hits the water, wear the wig, wear sunscreen, throw dip overboard. If you keep the dip you will be tempted to eat it and we all know what happens then.

LEGEND

Peter Frederick from Coleford has written in with some excellent tips for *Legend* from Mindscape. All confused adventurers out there will no doubt thank him profusely for his little missive.

The first quest is to complete the dungeons in Treidhadwyl. On the second level of these dungeons there is a permit that lets you visit the King and he will guide you on your way to the next part of the game. Most of the dungeon is pretty simple but here as some simple rules:

1. Check everything. Even the most obscure objects hold equipment.
2. Be alert at all times. Wandering monsters appear everywhere.
3. Don't hold your wizard back too much. In later stages he is the most important party member.

One room on the second level has a very obscure puzzle in it (It is marked 'X' in the diagram). To complete this room, cast a missile, damage spell at the tile marked 'G1'. Then cast a missile, damage, damage spell at it. This will put two tiles in the water and let you access a lever. By using various combinations of the two spells and the lever you can then reach the south door. This door is locked with a silver key which you should have found earlier on this level. The room marked 'S' contains the permit for the King which is obtained by the use of levers in the room marked 'D'. The switches are protected by doors which are opened by ornate keys, the last of which is behind the door in room 'X'.

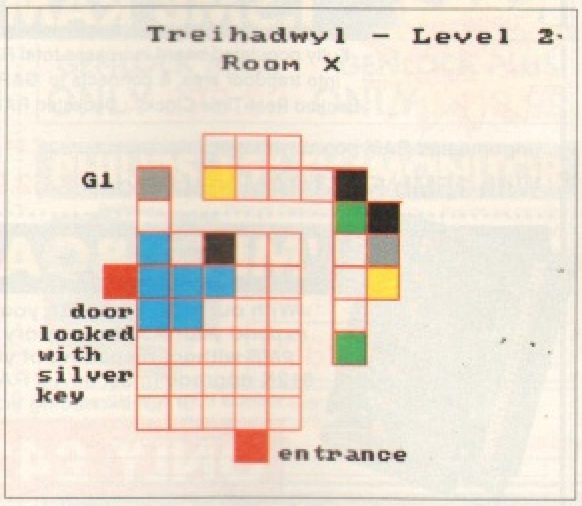
The Shrine replies: I knew that! I also know that this game is currently driving adventurers crazy all over the country. It's a great game by any standards. Did you know it was written by one of the team of writers who wrote *Bloodwych*? That was another game which was responsible for driving men crazy.

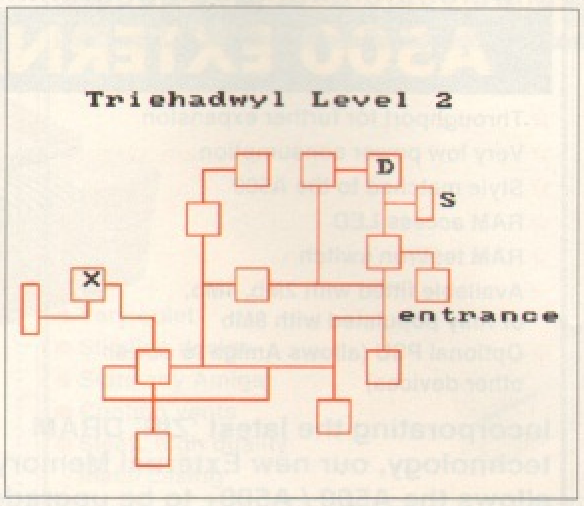
ENCHANTER

Just to prove that there are still some people playing very old games, Andrew Baxter from Bangor has written in for help with two of them.

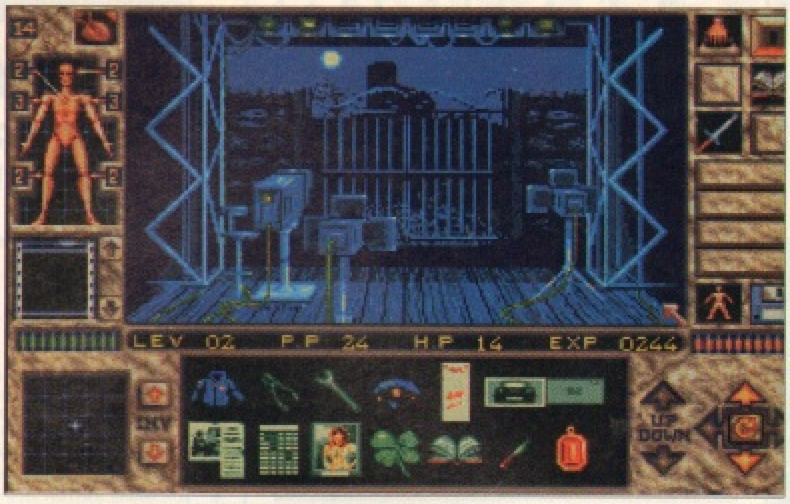
The first is *Enchanter* (Infocom). He is at a loss with what to do with the rat-hole in the library. He is particularly frustrated as he feels it contains what he needs to kill the dragon in the final room. He has the spell to sort out Krill – it's just that damn dragon which stops him!

The second problem is with the *Leather Goddess of Phobos* (Infocom). He has collected all eight pieces of the device which Trent asked for, given them to him and then – NOTHING! The only two things he didn't do on Mars were: (a) Buy an exit from the Exit Shop. He thinks that this is perhaps important, but he just couldn't get back to the shop, because his barge is stuck at the Ice Dock, and (b) get the yellow flowers in Cleveland.





Need some help in the dungeons of *Legend*? One reader has sent a piece of advice for you.



As Elvira's boyfriend this game demands that you brave many horrific hazards to rescue her from the clutches of the evil demon.

Even though these games are very old and many of our readers may not even have heard of them, in the good old days of Commodore User, when the Amiga was just a twinkle in Commodore's eye, a reviewer called Keith Campbell would regularly give Infocom text adventures top marks. Andrew has also read somewhere that Infocom are re-releasing a compilation of 20 games for £40. It's a brave move in these days of *Monkey Island* and *Eye of the Beholder*, but if it catches on the mailbag here at The Shrine may expand considerably over the coming months. Oh, and whatever happened to Keith Campbell?

The Shrine replies: To answer your last question first, Keith Campbell was seen at a Press Reception where he appeared to be attempting to enter the Guinness Book of Records for 'Stuffing the Most Sausage Rolls Down Your Throat Competition'. The last time he was spotted was when he was presenting the Adventure Game of the Year Awards at the Sherlock Holmes Restaurant in London. Since then 'zilch'! Perhaps we could turn it into a quest? The 'Search for the Old King' perhaps?

The rat hole you speak of in *Enchanter* is a mouse hole (you certainly fooled the 'Search' option in my magical word-processor!). You merely need to reach inside and seize the GONDAR spell, which as you rightly surmised dispatches the fearsome dragon. When you first enter the Exit Shop you can't buy anything because the proprietor doesn't have change. Don't worry, you'll be back. Later in the game (just after the Princess leaves), you can go back to the Royal Dock and use the raft which you found earlier in the catacombs to take you to the Donald Dock. Climb up the sand dune and from there you can go back to the shop. Buy the exit which comes in a tube. The shopkeeper will drop it on the floor so you must rake the dust to find it.

WRITE BACK

If you have a problem, a notice for the Board, or perhaps you have a piece of scandal which you wish to whisper in the Inn, write to Tony Gill at: The Troll's Head Inn, CU Amiga. Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.

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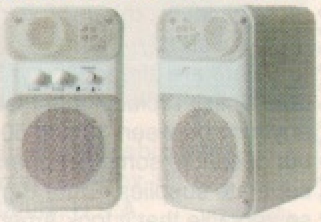
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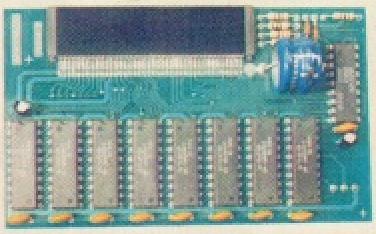
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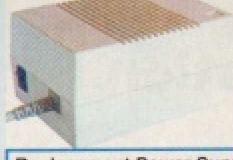
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Within the next section anything can happen. Every month, we will be getting to grips with strange new software, seeking out intelligent peripherals and inviting you to....

GET SERIOUS

CU AMIGA TOP RATED

The top rated accolade for non-games products scoring over 90%. They will definitely be worth the money and are likely to act as a benchmark for future releases

THE MOUSE ARENA

If your arm aches after a day's typing, Mat Broomfield may have the painkiller for you.

Do you suffer from RSI? You don't know what it is? What about Carpal Tunnel Syndrome, surely you know what that is? No? Well that's no surprise because until recently I'd never heard of it either, but apparently both terms refer to injuries which are becoming increasingly common among computer users.

RSI actually stands for Repetitive Strain Injury, and it refers to any injury which is caused by repeating a movement over a long period of time. In the good old days of pens and pencils, there was a similar version known commonly as writer's cramp but, in keeping with the 'bigger and better' age we live in, RSI is considerably more serious, accounting for over 100,000 surgical operations last year in the United States alone.

You may also have heard of a version of the injury common to computer typists, but since it has been long identified, there are already a plethora of preventative measures available for such people. What you may find worrying, is the fact that mouse users are also in danger according to recent findings. It seems that the relatively limited movement of a user's wrist and fingers is capable of causing severe internal inflammation of the tendons which in turn compresses the nerve fibres of both the wrist and fingers causing pain and any of a range of unpleasant ailments including ganglion cysts

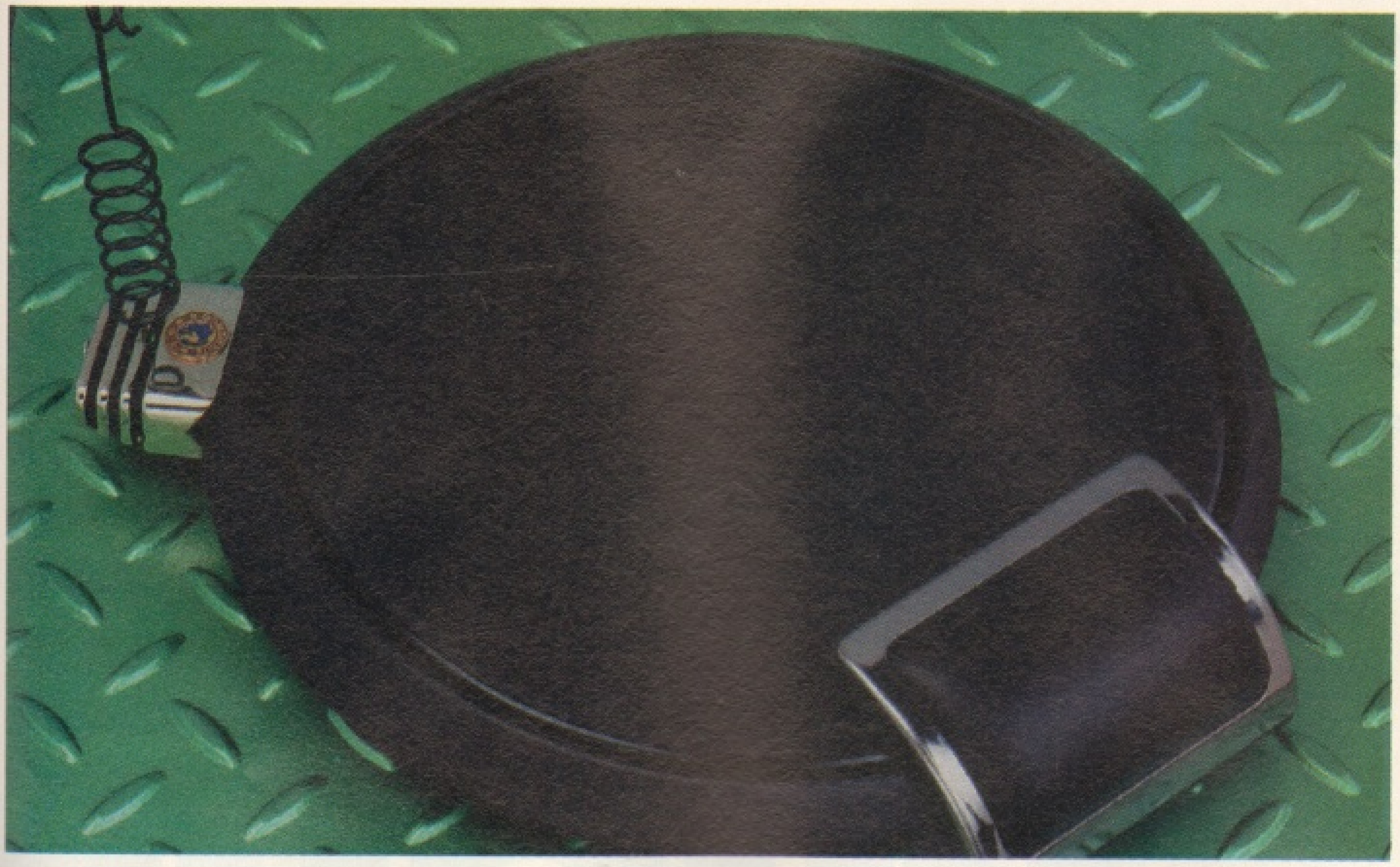
BIGFOOT

Is your power supply feeling the strain? Does it fizzle late at night? Mat Broomfield steps forward with one of his own.

For reasons of cost effectiveness, the Amiga's power supply is only just enough to power the computer, one extra drive and a recommended internal memory upgrade, and even then not always!

As you add more and more peripherals to your computer, you place a greater strain upon the hard drive. And when you add peripherals that are not recommended by Commodore, the strain may be too much. For example, if you add two extra floppy drives, a 2Mb internal upgrade or higher or even an external hard drive, the power supply is likely to roll over kicking its little wiry legs in the air. This may occur the second you try to switch on, or may only happen after half an hour or so. However long the problem takes, the answer is simple: get a more powerful supply.

There are already a number of perfectly acceptable British replacement PSUs, which offer anything between 30 and 50 percent more power, but of course some peripherals require their own separate supplies. Enter Bigfoot, a PSU which is so versatile that it took America by storm. A standard A500 supply provides 35-50 watts of power,



support at its front left. The support is probably the most important part for not only does it give added comfort when using the mouse, but it holds your hand and wrist in a straighter posture which reduces the likelihood of RSI.

To be frank, the unit takes a little while to get used to because, although the tracking surface is more than large enough, the range of movement permitted when your wrist is in the correct position is not always sufficient to move the screen cursor where you want it to go. Nevertheless, the Mouse Arena is extremely comfortable to use and, at just under $30, is very reasonably priced... Especially when you consider the fact that RSI related injuries will account for over 40 BILLION dollars worth of lost revenue and medical care next year!

Unfortunately, Forminco don't yet have a European distributor, although they tell me that they will consider all applications.

and bursitis (yeach!).

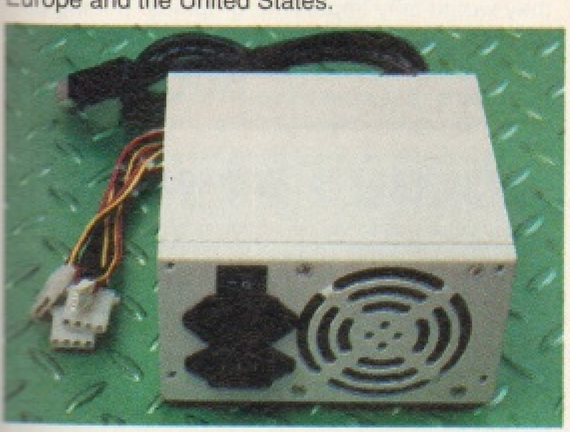
Canadian company Forminco take the problem very seriously and have, for a number of years, produced an entire range of computer user's furniture to improve the healthiness of our working environment. One of the cheapest and most immediately effective solutions is a simple replacement for the mouse mat called the Mouse Arena.

The Mouse Arena comprises a circular plastic board about 10 inches in diameter. The board is angled slightly downwards and to the right (in the right-handed user position), and is coated in a special material called Tyron, a low-friction surface which repels fluff and dust, thus keeping your mouse cleaner for longer. At the back of the Arena, there is a sprung cable holder which lifts the mouse cable off the working surface and out of your way. The unit is completed by a leather covered padded wrist

Contact: Forminco Inc., 215 Grand Pr., L'Acadie, Quebec, Canada JOJ 1HO. Telephone: 0101514 444 9488. Price: $29.95. 74%

but Bigfoot pumps out a whopping great 200 watts. Better yet, not only does it come with a standard Amiga power connector, but it also has three additional ones for connecting directly to your extra peripherals. There are three dual supply 5 and 12 volt lines for plugging into hard drives or extra floppies. If the connections are not suitable for your system, Micro R&D, Bigfoot's manufacturer, will happily supply you with a converter to fit.

At $129.95, Bigfoot is not cheap, but when you consider that it can replace all of your power supplies in one go, then perhaps it's worth that much just for the sheer convenience. The unit is robustly manufactured, and is switchable between 110 and 230 volt inputs making it ideal for use both in Europe and the United States.



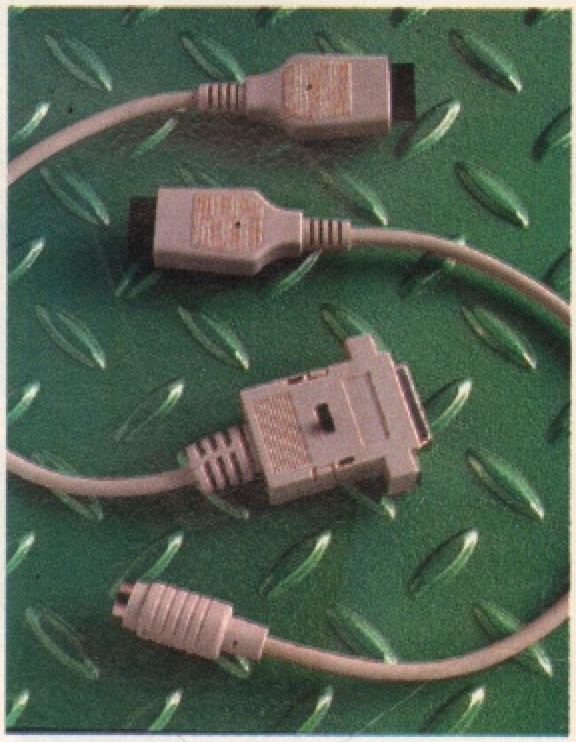
Bigfoot PSU, $129.95 (including shipping). Micro R&D, 721 'O' Street, PO Box 130, Loup City, Nebraska 68853, U.S.A. Telephone: 0101 308 745 1243. 83%

DP IBM ANALOGUE INTERFACES

Having trouble controlling your F-15 Interceptor? Tony Horgan investigates a way to regain that control.

Digital joysticks are fine for most games. In your average shoot 'em up, you need to be able to move around as quickly as possible, changing direction in a split second and locking into the diagonals without any fuss. When it comes to using a digital stick with a flight simulator, it's a different matter. Planes and cars don't work on a simple on/off principal (Minis are the exception to this rule). When you turn the steering wheel, or put your foot on the accelerator, you do it with a degree of force, which determines how much the car turns or speeds up. To simulate this on a computer, you need an analogue joystick. There are a few available for the Amiga, but most of the best are PC compatible. Now you can tap into that range of PC analogue joysticks, with this new adaptor Digiprint.

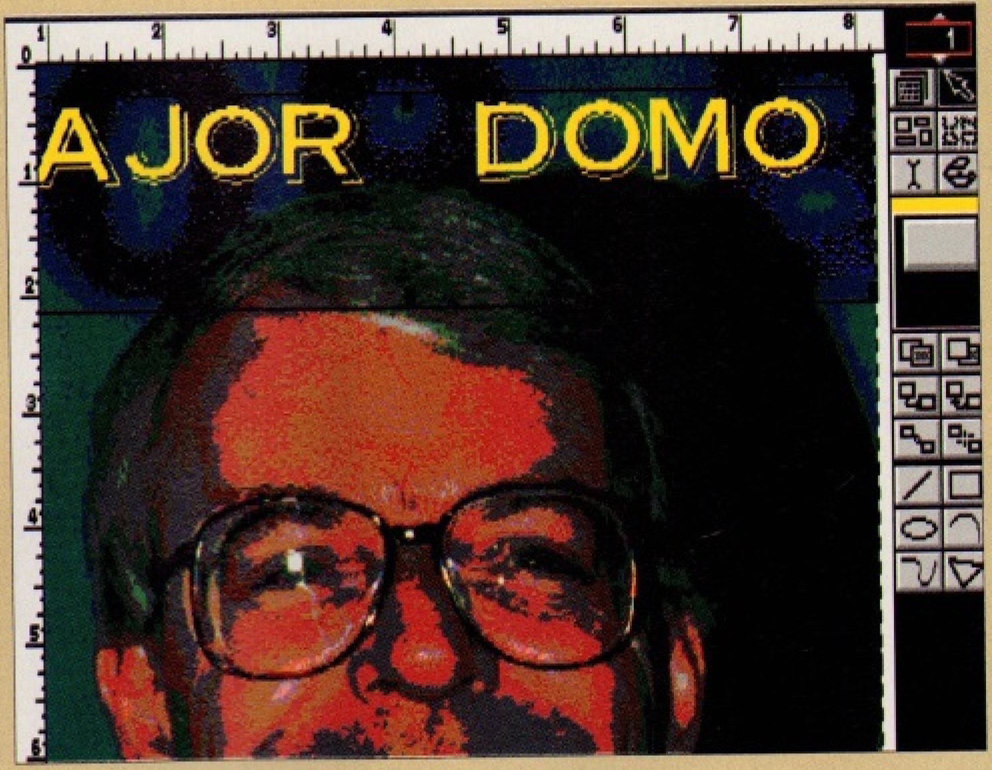
The interface is very simple: there's a 15-pin D-socket at one end of the short cable, and a standard Amiga joystick plug on the other. You plug your PC joystick into the 15-pin socket, and



then connect the other end of the cable to your Amiga joystick port. A 3-way switch at the 15-pin end gives varying sensitivity levels. A neat little widget for anyone big on flight simulations. Digiprint also do a similar converter that allows you to use a PC mouse with the Amiga.

Contact: DMI Plc., Unit 3, Poyle 14, Colnbrook, Slough SL3 ODY. Telephone: 0753 686000. Price: £13.99. 83%

When the Amiga's most powerful and easy-to-use DTP package is altered there are an awful lot of people who are going to be interested in how it turns out. Nick Veitch is one of them.



Even 24-bit images are rendered fairly well when they are imported into the new AGA supporting *ProPage*.

PROPA

COMPATIBILITY

When the A4000 was released there was no small amount of controversy. Much of this was due to the hardware configuration of the machine itself, but some questions were asked about just how compatible some software was.

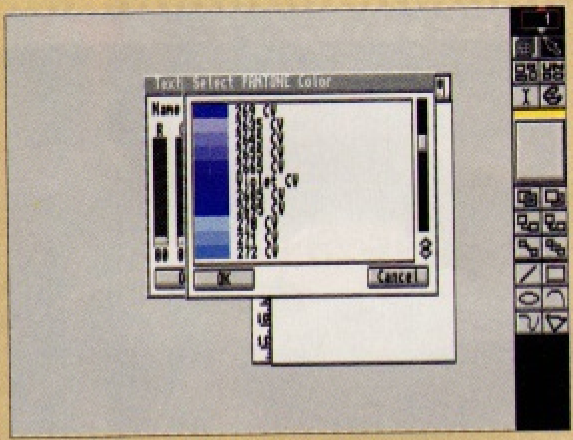
One of the companies to come under fire were Gold Disk, in particular over *Professional Page*. Whilst our copy here at CU Towers seemed to work perfectly, with the exception of the Genie interface (which claimed that ARexx wasn't present) and the menu bar (which occasionally turned completely black), other people had major difficulties. Something had to be done.

PLUS ÇA CHANGE...

So does the change to the latest version really merit the tag v4.0 then, if it's just a compatibility fix? Well, yes it probably does. As well as making the new version compatible with AGA machines, it actively supports them.

The first major difference is of course in the display. *ProPage* now supports 256 colours. This means that effectively all the graphics on the screen can be displayed fairly realistically.

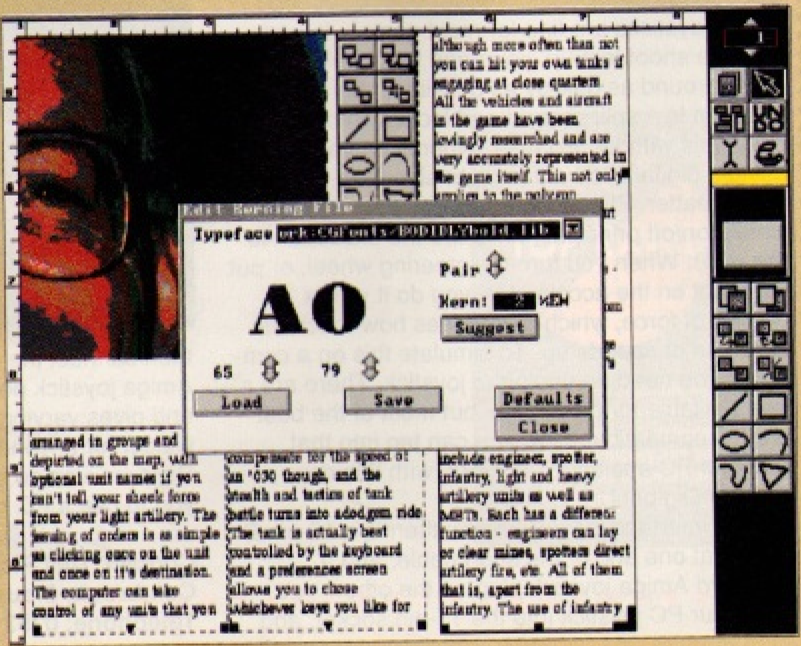
The colour palettes are now displayed so that it is actually possible to tell the difference between adjacent Pantone colours (but bear in mind that the screen representation is very different to how the colour will appear in print – this is not Gold Disk's fault, it's a problem with any software – see the box on Colour Printing). *ProPage* has always given the best renditions of colours on screen, but those funny dither patterns used on older machines were a little hard on the eyes after a while, especially in interlace mode.



Having extra screen colours available also makes things like using the Pantone requestor a bit easier. You can actually tell the difference between all the colours now!

POLYGLOT PAGE

One of the criticisms that was often levelled at the older versions of *Professional Page* was that they would only import IFF graphics. Seeing as basically every Amiga art package has supported IFF graphics since the dawn of modern computing, this doesn't seem to be an unreasonable thing to do.

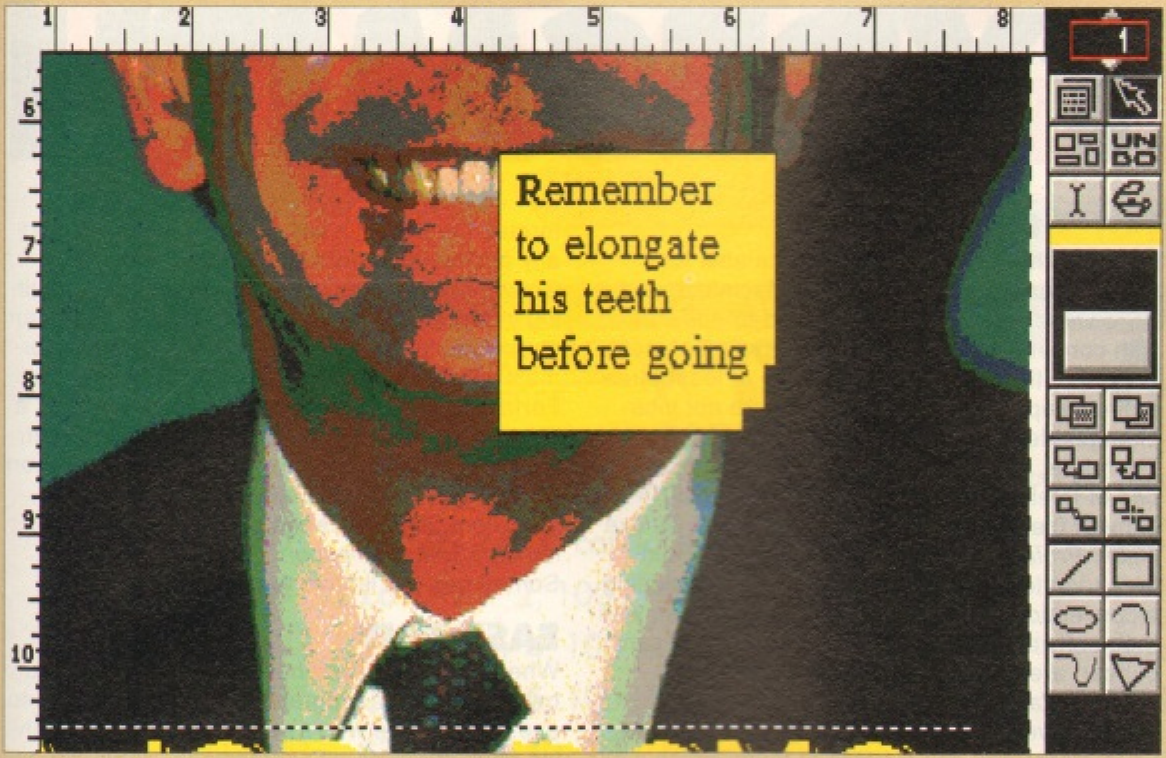


New options allow you to manually edit the kerning tables for each pair of letters in each different font. The on-screen display gives you an idea of how good – or how bad – they'll eventually look.

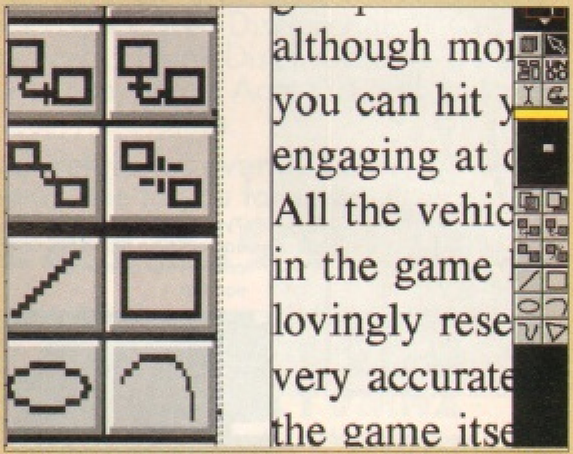
COLOUR PRINTING

The problem with colour requestors on screen is precisely that – they are requestors on a screen. The light reaching your eye from the screen is being transmitted from the phosphor dots on the inside of the CRT. The light reaching your eye from this magazine probably started off about 10 feet away in a glass bulb and then bounced off the page before reaching your eye.

The difference between transmitted light and reflected light is quite vast. For a start most reflected colours are darker and the hue less intense. There are ways around this, using special inks you can obtain fluorescent or special colours, but this is no longer part of the standard 4-colour separation process and can be very expensive.



You can leave yourself little memos too (or should that be pronounced 'Mee-mos'?) just by clicking on the yellow area between the text tool and the page area indicator. These can actually be very useful, especially if you are sending your work off to a bureau who are likely to lose any written instructions you might have included.



With a custom zoom to 400% you can really check out all those little fiddly bits that 200% zoom wasn't reliable enough for.

GE 4.0

However, an awful lot of people like to use their Amiga in conjunction with their PC or Mac, or even more likely, they like raiding clip-art which can be found on many PD disks and bulletin boards in various Mac and IBMish formats.

ProPage now supports several of these formats, including PICT, TIFF and GIF. Of course, if you are serious about DTP you should have a copy of ASDG's *Art Department Professional*, which will allow you to convert between these formats anyway.

Structured graphics have been improved also, by provision of an import module for *Adobe Illustrator*. Anybody who has used Gold Disk's own *Professional Draw* would be driven insane by the terrible font handling, slow refresh and inaccurate screen displays of *Adobe Illustrator*, but let's face it, an awful lot of people use it. There is a large amount of clip-art that exists only as Illustrator files, which are not easy to convert to a more sensible format. Having an Illustrator module is the only realistic way you can make use of these files.

RENDERING

One of the most noticeable new additions to the software is the screen render of graphics. With limited colours available bitmap graphics were rendered only as a limited greyscale image. This was very reasonable because it kept refresh time down and also gave an accurate enough rendering of the image to allow precision placement.

The only problems were that it was very easy to miss horrendous mistakes (like the palette on the bitmap was screwed up) and it was very difficult to assess the overall colour tone of the page. This is something that designers who have been to art college like to do a lot. Well, they can sleep easy at their desks, because in AGA mode the new *ProPage* will attempt to depict any bitmap graphics as accurately as possible, which means that with anything up to 256 colour images you get an exact colour representation. Images over 256 colours are rendered in as many colours as possible, which usually means you can't tell the difference.

EPS SUPPORT

Professional Page has always supported EPS files, which are almost an industry standard across Amiga, Mac and PC machines. EPS files are made up of a lot of raw postscript data, which only makes sense to Postscript interpreters, and a header containing information for the host application. Many programs which output EPS files also include PICT previews which can then be easily displayed. Up until now, this feature was not supported by *ProPage*, which was, to say the least, a bit of a pain.

It's not too bad if you have created the EPS file yourself, but when it is one that you have never seen before then you could be in trouble. Even a mono image in very low resolution could give you some idea of size, borders and so on. Thankfully this has been fixed, so now you can look at things before you print them.

SIDE BY SIDE

At long last one of the most annoying drawbacks of *ProPage* has been fixed. Now, not only can you view pages side by side, but you can work on them as well. At least, you will be able to. Since the product is only in a pre-production version at the time of writing, this feature isn't working properly yet – but it will.

The zoom options have also been expanded to allow a user-definable zoom. Unlike *ProDraw* this isn't specified by drawing a box around the area to display, but via the more cumbersome method of typing in a percentage. Still, it works, and that's the main thing.

CONCLUSION

This is more than just a bug-fix, this is a major update and certainly deserves the 4.0 tag. The Amiga will reach new heights of professionalism with this package. Now that many fonts can be supported, there is a 256 colour display and a variable zoom the Amiga can really hold its head up in the DTP arena. *ProPage* has slipped behind *Quark Xpress* on the Mac (*ProPage* had rotating text boxes before *Xpress*) but is still miles ahead of any DTP system on the PC.

The future looks even better as the Amiga itself is updated to meet the challenges of tomorrow. Of course, the price of progress is that some people will be left behind – *ProPage* really does require at least an '020 based machine to run on.

JARGON BUSTERS

EPS – Encapsulated Postscript. Essentially this is a file format which allows a Postscript output from one program (usually a graphic) to be included into another Postscript compatible software package. Because the image is stored as Postscript data the host application simply has to include the raw data part of the file in the information it sends to the printer. EPS is about the closest that the world outside the Amiga has to a standard file format, but there are still many varieties of it, some of which are not compatible.

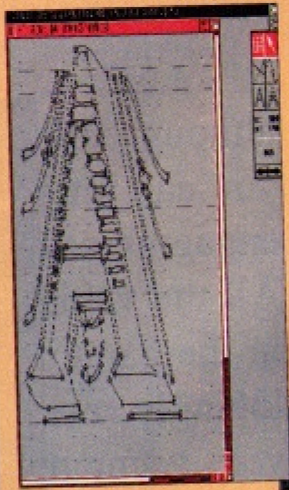
bitmap – Bitmapped graphic. The most common form of image file, where the graphic is stored as a series of binary bits, each one representing an individual pixel.

Structured graphics – The other type of graphics, which are represented as instructions on how to draw shapes, rather than a memory-mapped rendering of the image. *Professional Draw* and *Expert Draw* on the Amiga use a structured graphics format, as does *Adobe Illustrator* on the Mac.

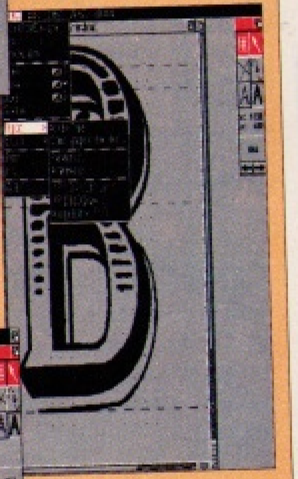
AGA – The latest version of the Amiga chipset, as found in the A1200 and A4000, which among other things allows 256 colours on the screen in any resolution.

After a long wait, Amiga owners will soon be able to design and edit their own scalable fonts thanks to a new program from Germany. Mat Broomfield takes a sneak preview.

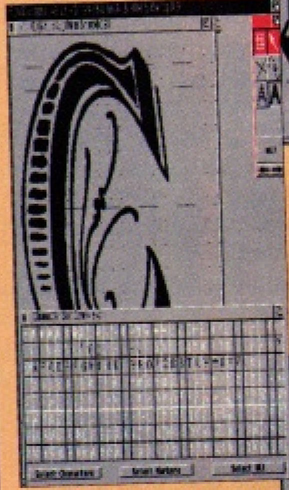
TYPESMITH

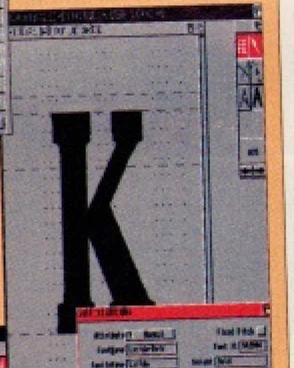


Typesmith allows you to edit existing typefaces or create your own from scratch.



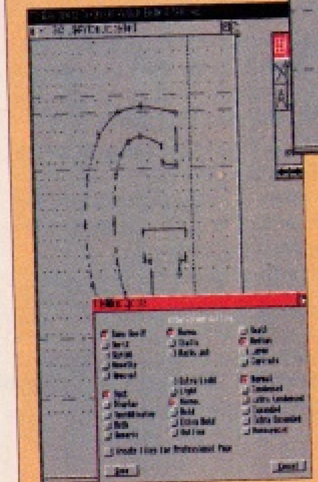
The program can handle just about every Amiga font format except the non-standard soft fonts used by *Final Copy*. It even lets you load fonts created on the Apple Macintosh or a PC compatible.





You can create an entire font, or simply the characters that you require.

Every font needs a width table, but fortunately you don't have to do the entire tedious job by hand; *Typesmith* will automatically create one which you can simply add the final touches to.



When saving Compugraphic fonts for use in *D-Paint* or *Pro Page*, you can specify such things as whether or not the font is italicised, and what resolution the font should be saved at.

FONT CONVERSION

Although there are a number of scalable font designer packages available for Macintosh and PC owners, Amiga users have had to make do with converting their fonts from these machines. To add to their problems, there are at least three entirely separate font types which are not interchangeable between software packages. Therefore, somebody who owned a large collection of Intellifont typefaces could not easily convert them for use with *Pagestream* or *Deluxe Paint. Professional Page* manufacturers Gold Disk tried to get around the problem by including a conversion program, called *Font Manager*, with their software, but the range of fonts that it can convert are still limited to Adobe Type 1s as used by *Pagestream*.

What we need is a good program that allows us to create and edit a range of fonts, which can then be saved in the format of one's choice. Thanks to *Typesmith*, that need could soon be fulfilled fulfilled!

CUSTOMS AND EXCISE

Typesmith can import and export Amiga, PC and Macintosh Postscript, Adobe Type 1s and 3s, Agfa Compugraphic Intellifonts, *Pagestream* DMFs, Adobe hybrids and even IFF bitmap fonts. By default, the program loads and saves *Pagestream* DMFs, and all other fonts are considered to be 'alien' and must be imported as opposed to loaded. A quick look through any PD catalogue will reveal that DMFs are by far the most readily available (and popular?) font-type on the Amiga, so this seems to be a logical move.

Although the program will run on a 1.3 A500 with at least 1Mb of Chip RAM, the creators suggest Kickstart 2 and an additional 2Mbs of Fast RAM to go with it. They further recommend an extra floppy drive, a further 1Mb Chip RAM, a 68030 processor or accelerator running at a minimum of 25MHz, a maths co-processor running at the same speed and a hard drive. As I already had all of these, there was no problem, but considering the amount of maths involved in font format conversion, I can guarantee that running the program without a 68030 and maths co-pro will mean that there are a lot of times when you'll be sitting twiddling your thumbs for five minutes or more at a time while *Typesmith* performs the required calculations.

CONVERT A FONT

At its simplest, the program can be used merely for converting fonts between formats. Load a font in one format then select the required export format and Bob's your uncle, it'll do all the necessary work for you. If you've loaded a font which doesn't include its own width tables (used for calculating character spacing), you'll have to create one before the font can be used. To do this, you can either load a table from an existing font, or create your own from scratch. If you decide to make your own table, *Typesmith* has a feature which will automatically create one based upon the size of the characters in your font. Although this width table will not be perfect, it saves a lot of messing about, and can always be tweaked at your leisure.

Once you've specified the appropriate save format, the program will save the main font and any additional metrics that may be required. Conversion is an extremely easy process requiring virtually no effort from the user. However, an awareness of the limitations of different font formats will save you from potential grief later on. For example, although you may load a font as a *Pagestream* DMF, which is the simplest format, there are certain complexity limits imposed upon Intellifonts which don't exist for DMFs. Therefore, it's not always possible to simply import a font then export it in a new format. Sometimes you'll have to modify it first.

EASY EDIT

When it comes to editing a font or creating your own original, the program is still quite intuitive to use. For anyone who's used a structured graphics package, such as *Professional Draw*, the creation process will already be very familiar. All characters are created using lines and bezier curves. Bezier curves are mathematically defined curves consisting of four elements: curve length, starting point and two control points, which are used for specifying its direction and angle.

By employing mathematically defined fonts instead of using bitmaps, programs such as *Wordworth, Pro Page, Final Copy 2* and *Pagestream* can always print at the maximum resolution of your printer regardless of the size or orientation of the characters being printed.

Bitmapped fonts also have a purpose within *Typesmith*; they can be used as outlines for tracing a scalable font. Simply load the required bitmapped font and then design your structured font over the top of it.

CONCLUSION

I very much liked what I saw of *Typesmith* as it finally gives me the opportunity to use any scalable fonts I want with *Pro Page*. Although it's won't be selling at a giveaway price, it's still a fraction of the cost of similar products on other computers. When you consider the fact that *Typesmith* will have features not found on ANY other package, the price doesn't seem so bad at all.

Typesmith will be distributed in the UK by SDL and will cost £135. Contact SDL on 081 309 1111. In non-English speaking countries the package is called *Font Designer* and is distributed by its creators, BSC Germany. Phone them on 010 49 89 357 1300.

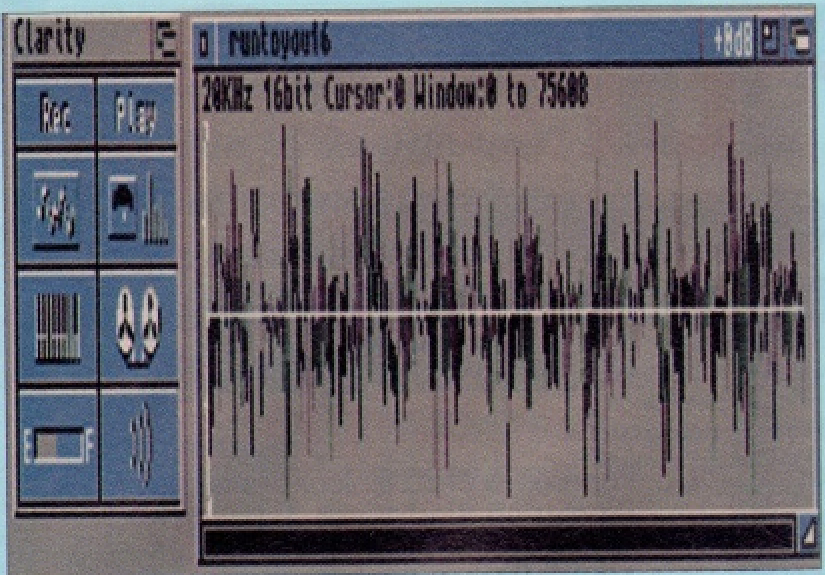
JARGON BUSTERS

Adobe – A very larger American company, the creators of the Postscript language and the owners of a large number of fonts. Adobe font formats are the closest thing to an industry standard.

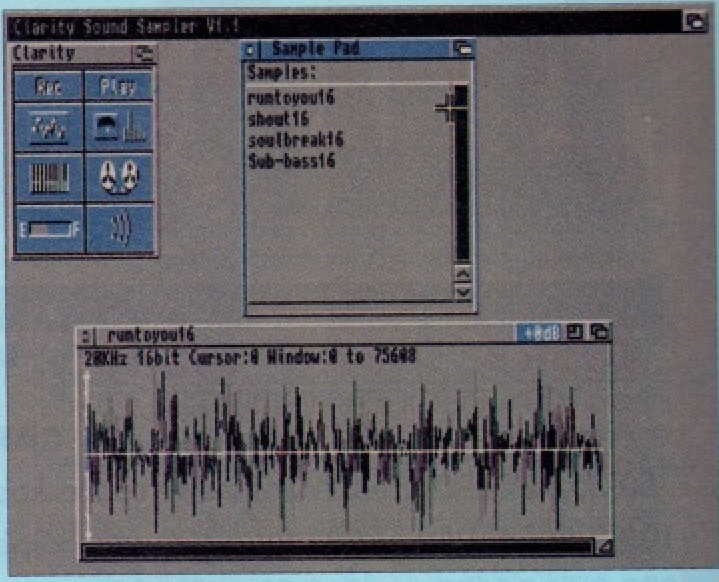
Intellifonts – The Compugraphic fonts from AGFA which the Workbench uses (version 2.04 and up). These are not the same as CG fonts used by Pro Page et al.

Scaleable font – A font which is stored in a structured format which enables it to be used at any resolution without loss of detail.

Maths co-processor – An additional processor chip which, when installed, speeds up floating-point calculations by around six to eight times.



Here's one I prepared earlier. Each sample has its own editing window, which can be scaled, positioned, opened and closed as you wish.



You can have up to 64 samples in memory at any time. To avoid you having them all cluttering up the screen at once, you can pick them off from the sample pad when you need them, and put them back when you've finished.

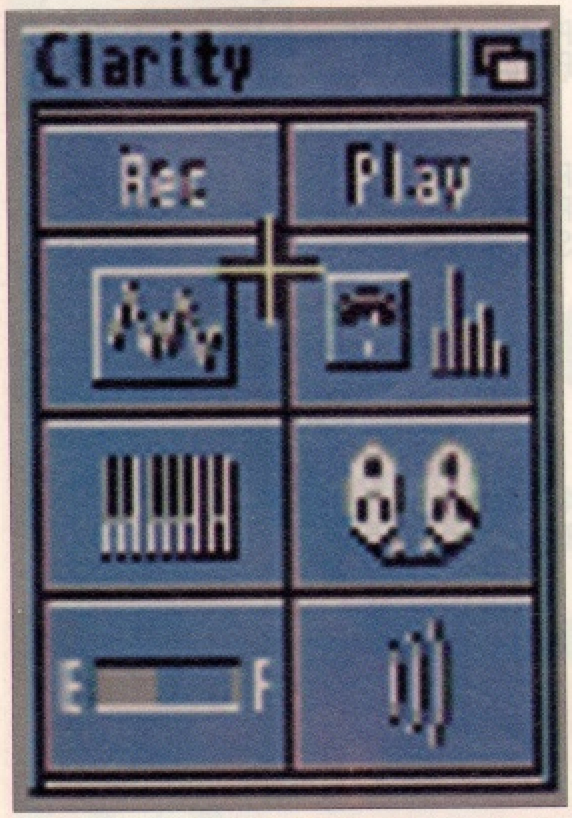
As third party manufacturers continue to cash in on Commodore's failings. Tony Horgan returns to test the latest in 16-bit stereo sampling.

CLAR

MAD AS A HATTER

It makes me mad! Commodore continue to upgrade the Amiga with faster processors and improved graphics modes, bringing almost everything up to 32-bit spec, but refuse to do anything with the old 8-bit sound chip! Third party sound upgrades have attempted to rectify the situation, but so far none have been cheap, flexible, or powerful enough to catch on in a big way. Microdeal's latest offering, Clarity 16, offers 16-bit stereo sampling, at rates of up to 44.1KHz. Sounds pretty tempting doesn't it?

I don't want to start on a low note, but no-one ever explains what these things won't do, so let's just get a few things straight before we begin. Clarity won't transform your Amiga into the multi-channel 16-bit sampler you've always dreamed of. It won't do the job of a professional sampler, such as an Akai S1000, and you can't use its 16-bjt samples directly with your standard tracker or sequencer.



Most of the main sections of the Clarity software can be called up from this small control panel, which sits at the top left of the Workbench screen, although you can move this, and any other windows where ever you like.

WHAT DOES IT DO THEN?

So, if it doesn't do any of that, what does it do? To give you a better idea of what to expect, I'll explain how it works.

The hardware is enclosed in a slim plastic box, approximately 13 x 11 x 3 cm in size. This connects to the serial and parallel ports of the Amiga, via a pair of ribbon cables. The back of the box has two phono inputs, two phono outputs, and MIDI IN and OUT connections. The software comes on two disks. The first has the main sampling and editing program, while the second is dedicated to demo samples and sequences.

Any samples you grab with the system are stored in and played back from whatever available memory you have in your Amiga, whether it's Fast or Chip RAM. 16-bit sounds are output through the external hardware. If you like, you can settle for 14-bit output, which is channeled through the standard Amiga phono sockets. Samples are recorded through the stereo inputs at the back of the Clarity box. Running on a 68000 Amiga, the top sampling rate is 44KHz in mono and 32KHz in stereo. Machines with faster processors can record at around 42KHz in stereo.

MAKE SOME NOISE

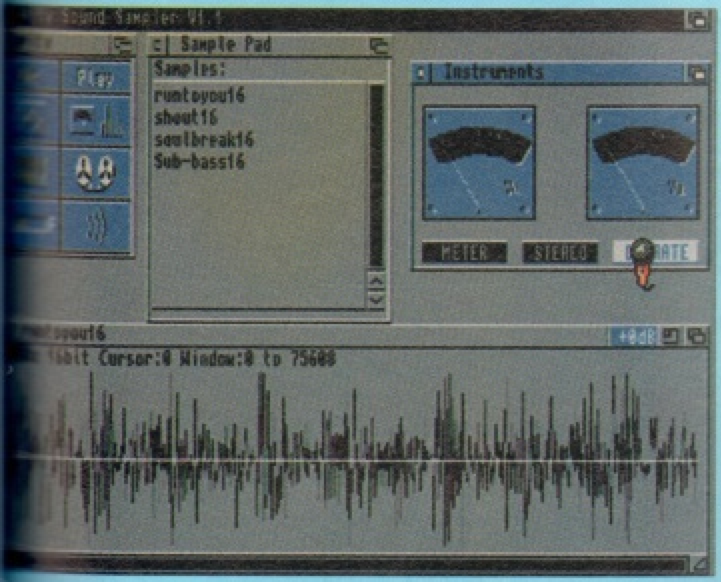
Before you have a go at sampling something yourself, you might like to load up some of the demo sounds. How Microdeal have managed to come up with such a lame set of samples is beyond me. Even though they're 16-bit, recorded at a generous 20KHz, they sound like 10 KHz 8-bit samples, and dodgy ones at that! If I'd asked for a demo in a shop, and heard these, I wouldn't touch it with a barge pole. Fortunately, Clarity is capable of far more impressive sampling.

Sampling for yourself is easy enough. There's a choice of three types of input monitors to help you get the right volume level. The spectrum analyser and VU meters look pretty, but the oscilloscope is the most practical of the three. If you go with the default settings of 20KHz and 16-bit resolution, you can make an almost perfect recording within minutes of booting up. With these settings, three or four seconds of sampling uses about 150K of RAM.

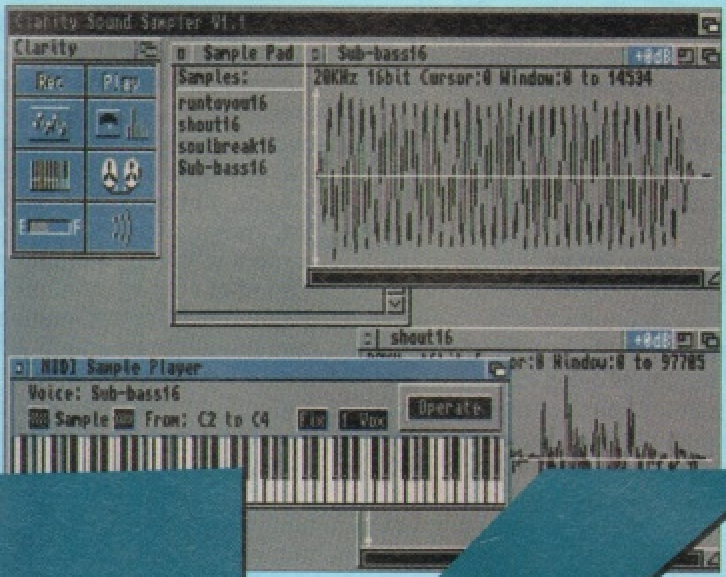
So long as you've got a good source sound, and the input volume is correctly set, there's very little difference between the original and the recording. Played back-to-back with the original sound, you might notice a very slight drop in the fidelity of the treble, but I must stress that this is very slight

WHY 16-BIT?

What's the difference between 8-bit and 16-bit samples then? The reproduction quality of any sample is governed by two factors: the sample rate, and the bit resolution. Just as interlaced graphics double the vertical resolution of a picture, giving more detail, so does a jump from 8 to 16-bit sampling improve the sharpness of a sound. The trouble with using 16-bit samples is that twice as much data has to be shifted around the hardware, which puts quite a strain on the system. Because of this, accelerated machines are better suited to the job than standard 68000 Amigas.



Monitoring your input before sampling can be done with any of the three scopes. The VU meters are prettiest, but the oscilloscope is probably the most useful.



When you've got some samples in memory, you can assign them to respond to different MIDI notes from an external device.

RITY 16

WHAT CAN IT DO FOR ME?

Depending on your set-up, the results you can expect from Clarity will vary. While it does run on a 1Mb 68000 Amiga, it much prefers an accelerated processor and plenty of RAM to work with. On the basic machine, you can expect excellent quality output with a single channel, and two channel sound with reduced fidelity. Faster processors allow it to push out more channels, up to a maximum of four. If you want to sequence the samples for musical applications,at the moment you'll need an external sequencer, as the one included with the software is a very basic single-track cue-list.

Memory is the other main consideration. 16-bit samples take up twice as much RAM as 8-bit samples. The good news is that Clarity can play its sounds from Fast RAM as well as Chip RAM. One feature not to be overlooked is the MIDI sample dump, which allows users of dedicated sample-replay units to exchange sounds between the unit and the Amiga.

indeed. Bass and mid-range frequencies come through without the crunchy characteristics of low-grade samples. Incidentally, the sounds are output at a full 'line' level, rather than the half-rated output of most Amigas, which helps keep background noise to a minimum.

THROUGH THE WINDOW

Strangely enough, the Clarity software doesn't open up its own screen. Instead, it uses lots of different windows overlaid on the Workbench screen. Every sample in memory has its own window, which can be re-sized, moved, or closed all together, just as any standard window. The advantage of this system is that you can arrange everything as you like. The disadvantage is that you're forever moving windows around, flipping them back and forth, and generally rearranging the screen. If you're anything like me, it won't be long before your screen is a complete mess! An interface along the lines of Audiomaster would have kept things a lot simpler.

Samples are edited from within their windows, which can be re-sized to give greater detail. Alternatively, you can use the zoom controls to move in on the waveform. Separate from the EDIT menu, which takes care of the basic cut-and-paste operations, is the PROCESS menu. This is home to the features that pass for effects in most sample editors, such as volume fades and so on. One of the more clever features is the 'loop and fade' option. This helps you create smooth loops, by fading the loop points into each other. For further help with looping, you can call up two independent windows, containing the start and end points of the loop. This is pretty handy, and means you don't need a photographic memory to match up the two ends. A freehand edit mode is also included, which can take out crackle, or add 'attack' to instrument sounds, and ease the process of looping further still.

Once you've got your basic sound, you can add some effects. Echo, flange and reverb can be added in varying degrees, and are cleaner than most effects you'll have used on 8-bit samplers, although the flange isn't the best I've heard. There's also a distortion option, but it's not much use, sounding as if you've recorded the sample with the volume too high. All of these effects can be used either on the samples you've grabbed, or in realtime on sounds coming through the phono inputs. If you use the realtime effects, you get 14-bit output from the Amiga's sound channels.

THE NITTY GRITTY

Okay then, we've got our samples sorted out, but what are we going to do with them? This is where it gets a bit disappointing. As it stands, the package comes with a single-track sequencer, and MIDI play mode. The sequencer is very simple. All it can do is string together a series of samples, one after another, playing only one at a time.

The alternative is to use the MIDI play feature. I hoped this would let you assign samples to different MIDI channels – a breakbeat on channel one, a bass on two, a vocal on three and so on, but it doesn't. What you can do is set up a 'map' of samples across different MIDI notes, rather like a drum map, and play them from an external MIDI keyboard. Sharing the keyboard between a number of samples isn't such a drawback as it may seem, as Clarity can't play samples much more than an octave above or below their original pitch anyway.

THE DOWNER

The big problem comes when you try to play more than one sound at once. On an Amiga with a 68000 processor, playing just two samples simultaneously is too much for it. You can do it, but any loops are ignored, and the sound quality is drastically reduced, completely negating the whole point of the package. It's possible to play up to four at once, but you'll need an accelerated machine for that. If you have an A1200, there are a few settings that need to be adjusted. The new figures are quoted in the manual. If you have a different accelerated machine, it's up to you to mess around with them, until you find settings that work with your particular set-up. An automatic speed test to replace this would have made things simpler.

For those without a MIDI keyboard, there's a

JARGON BUSTERS

Sample rate – The number of snapshots taken of a sound within a specific time (20Khz=20,000 snapshots per second).
Fast RAM/Chip RAM **– The two types of Amiga memory. Standard Amiga samples can only be played from Chip RAM.**
Spectrum Analyser **– An animated bar chart displaying the levels of different frequencies within a sound.**
VU meters **– Volume level indicators.**
Line **– Line level signals are output by things like CD players and synthesisers, as opposed to the lower mic level signals of handheld microphones for example.**
Hard disk recording **– A digital recording process that can store very long samples; CDs can be mastered from hard disk with no loss of fidelity.**
Looping **– Sustains a short sample indefinitely.**
Multi-timbral **– Plays different sounds simultaneously.**
Drum map **– The arrangement of drum sounds across the range of a keyboard.**

third option. Samples can be cued from the function keys, but you're restricted to playing them back at their original or re-sampled rates. In other words, you can't play tunes on them. So what practical uses are there for this? Well, the manual suggests theatre sound effects, and maybe adventurous DJs could find it handy.

WEIGHING UP THE OPTIONS

What all this means is that if you want to sequence your 16-bit samples, you're going to need a fast Amiga (preferably with a 68030 or higher), as well as a machine to sequence them from. If you use another computer as the sequencer, you'll need another monitor or TV also, and then it starts to get rather expensive – especially as you've only got a maximum of four voices.

Perhaps a better set-up would consist of your Amiga (it needn't be a fast one), and a dedicated sample replay unit, which would be a lot cheaper than a full-blown sampler. You could then record your sounds with Clarity on the Amiga, and port them to your replay unit with the MIDI dump feature. After that you could trash Clarity, and load up a sequencer into the Amiga, from which you could control your sample replay unit. That way you should be able to play more than four samples at once (depending on your replay unit), and still use your favourite sequencer on the Amiga. You'd have the luxury of powerful on-screen sample editing too, instead of poking little buttons and squinting at an LCD screen on a pro sampler.

So what options does this leave the owner of a 68000 Amiga, and no outboard gear? I'd say the best use would be as part of a live band. If you had a need for a clear drum loop backing, or wanted to cue one-shot samples, it would do the job without much fuss. Add a MIDI keyboard, and you could play simple monophonic parts too. Other than that, the only worthwhile use I can think of is as a source for decent 8-bit samples. If you record in 16-bit mode, then convert to 8-bit, you end up with a sample quality that would be tricky to achieve with a standard 8-bit cartridge. Of course, you can then use the 8-bit samples with your usual tracker.

CONCLUSION

All in all, I must say that I'm disappointed. Sure enough, the sound quality is superb, but it's not much use when you have to buy another computer to sequence a maximum of four samples. Unless it's to be used as a grabber for a sample replay unit, or for limited live work, there's very little it can offer owners of unaccelerated Amigas.

I can't help feeling that Microdeal have missed the point. As I see it, there are basically two popular uses for a sampler. Firstly, as a multi-timbral sound source for making music, and secondly, for hard disk recording. As it stands, Clarity barely manages the first task, and completely ignores the second. The hardware is impressive, but the software lets it down in a big way. With any luck, future updates of the accompanying software, or even a complete re-write, will allow you to use the kit to its full potential.

It desperately needs compatibility with existing tracker and sequencer software. If, for example, you could run Clarity software in the background, with the samples each assigned to their own MIDI channels, responding to MIDI messages from a sequencer running on the same machine, then we'd be in business. Add hard disk recording software to the package, and at this price, it would clean up in the digital mastering stakes. There's bags of potential here – all it needs is the right software to unleash it.

CLARITY 16

. . . at a glance

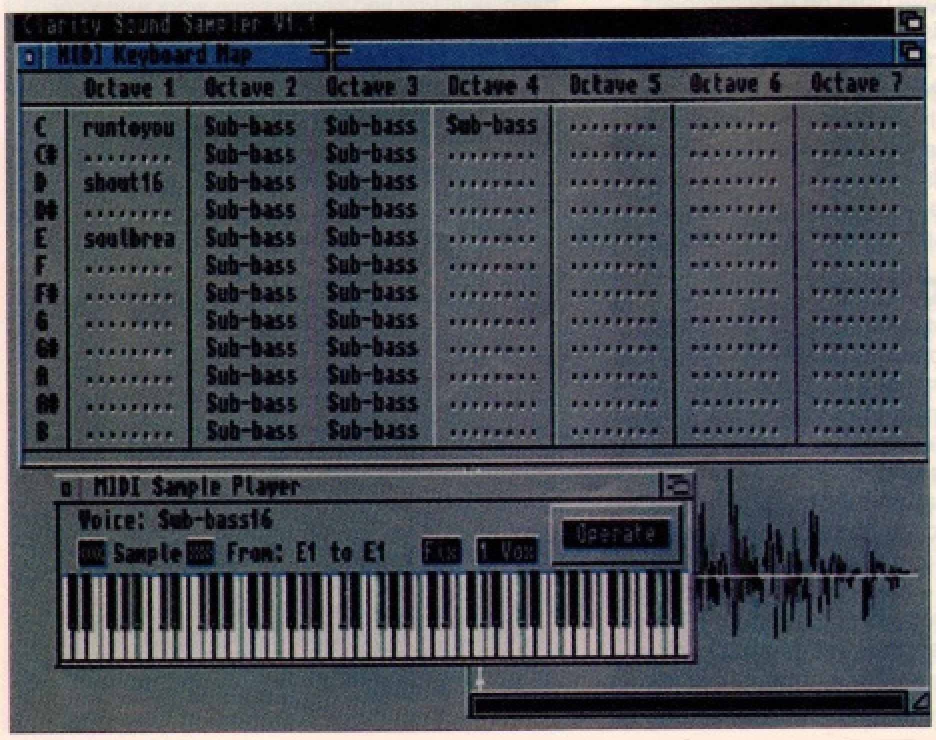
• Stereo 16-bit sampler • Sample rates of up to 44.1KHz • Excellent sound quality • Poor software • Simple single-track sequencer

Address: Microdeal, P.O. Box 68, St. Austel, Cornwall, PL25 4YB. Telephone: 0726 68020.

MICRODEAL £149.95

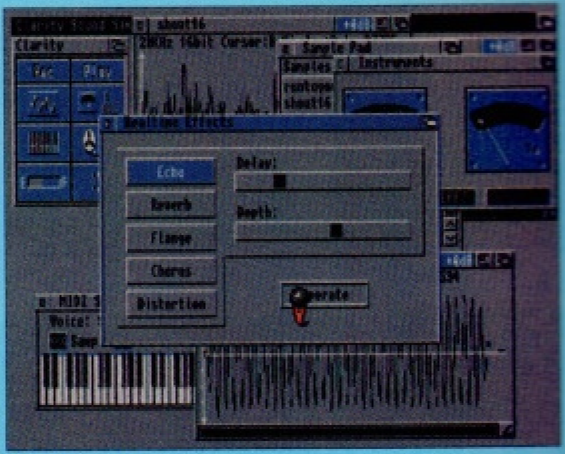
'Massive potential, not yet realised'

EASE OF USE	78%
VALUE FOR MONEY	75%
EFFECTIVENESS	60%
FLEXIBILITY	67%
INNOVATION	71%
OVERALL	**68%**



Call up the MIDI map to check that your arrangements are in order.

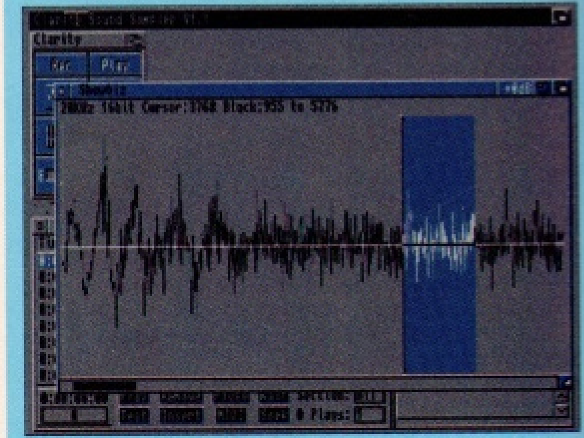
Samples can be assigned to different MIDI notes, although they can be given their own MIDI channels. These can be completely different sounds, or multi-samples of a single instrument.



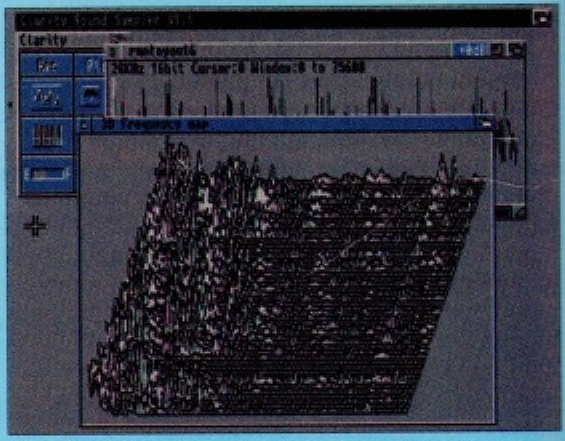
The four realtime effects can't manage 16-bit output, but the 14-bit output from the standard Amiga sound channels is pretty good all the same. When the effects section is activated, the sampling and playback features are disabled, but if you want to put effects on your samples, you can do that too.



Samples can be strung together with the single-track sequencer. It's really more of a cue-list than a sequencer, as there's no realtime recording, and no multi-track playback. It's best suited to sound effects sequencing, rather than music production.



For detailed editing and looping, the zoom mode is vital. There's also a gadget at the top right of every sample window that gives you a vertical zoom. A nice touch is the copy/cut buffer, which is stored in the sample pad as a separate sound, to be played or edited as any other.



The Fourier 3D display, made famous by the pioneering Fairlight sampler, serves no practical purpose, but does look very nice all the same.

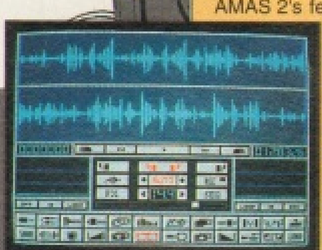
STEP FORWARD into the world of microdeal MUSIC

SAMPLERS & SEQUENCERS EXPLAINED

SAMPLE: A sound that has been loaded into a computer and is represented by numbers (digital) rather than noises (analogue).
SAMPLER: Usually a small cartridge that allows you to take sounds from a microphone (with amplification), tape, CD etc and record (digitize) them into your computers memory. Once in the memory a sample (sound) can be changed using the sampling software.
SAMPLING SOFTWARE: Allows you to alter sounds that have been digitized by the SAMPLER. Normal functions with sampling software include loading and saving a sample disk, altering the sample by cutting, speeding up/down, fading in/out, joining to other samples and much much more.
SEQUENCER: Allows you to take samples and play them back in an order (sequence) that you determine. For example if you sampled a piano note, a sequencer would allow you to play that note back at different pitches and in a sequence you decide. Your one note loaded into a sequencer can become a complete piece of piano music.
MIDI INTERFACE: A small cartridge which plugs into your Amiga and allows a Midi instrument (usually a Keyboard) to communicate with the computer. If you already have a keyboard then you need to check that it has a Midi Port on it for it to work with a computer.

AMAS 2

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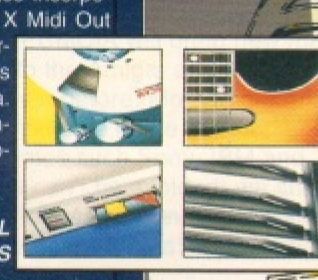
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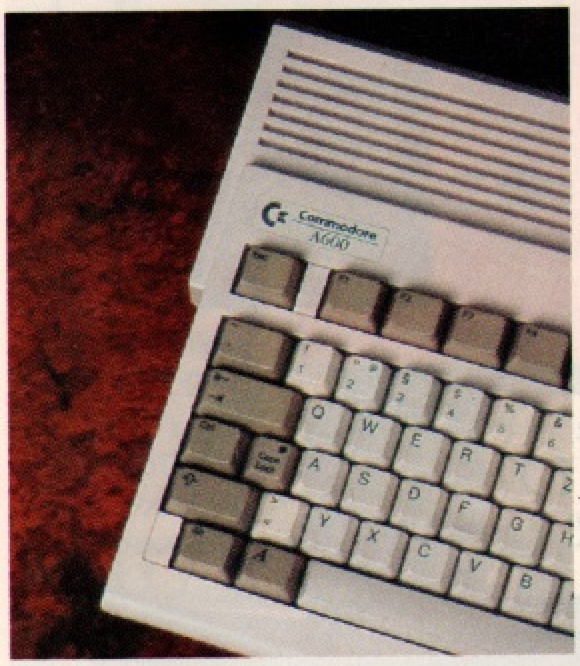
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Smart cards have come to the Amiga. Julius Alexander looks at the easiest way to pump up his RAM.

PCMCIA -







Amongst the many peripherals that PCMCIA cards can work with is the ubiquitous laser printer.

CREDIT CARD

The Amiga 600 and 1200 are great developments in the history of the Amiga. Both offer new advances and developments designed to keep your favourite computer at the forefront of home computer technology.

One of the many developments incorporated is the technology of smart cards. The small credit card slot on the side of the new Amigas offers possibilities for enhancement at previously undreamed of sizes. You can, for instance, now have 4Mb of extra RAM on a board the size of a VISA card. If you gave a product of this nature to someone several years ago they would have assumed you'd just got off a passing starship!

Whilst plugging in the credit card peripherals may be new to the Amiga, they're actually a relatively old development on other systems. Commodore have once again taken tried and tested technology and incorporated it into their range, strengthening the Amiga still further in the process. So where did this new, but old, technology come from? What does it do and where is it going?

Over the next two pages I hope to answer these questions and give you some idea of how to use this new technology.

ACCESS OR VISA?

There are in fact several different types of computer compatible credit card. In the PC market they are most often found as the storage technology for palmtops and hand held organisers, the three most commonly known manufacturers adopting such cards being Casio, Psion and Atari. Way back when such cards were first becoming common occurrences many manufacturers developed their own. However, realising that having loads of totally incompatible but identical looking products running around was: A. not commercially sensible, and B. very stupid, a group of PC manufacturers with a sprinkling of other hardware companies jumped into bed with each other and formed an association to develop some semblance of an international smart card standard. This group was, and still is, known as Personal Computer Memory Card International Association or PCMCIA to its friends. Their name then became the name of the operating standard for the smart cards that they produced.

GOING JAPANESE

Adopting a similar approach, the Japanese developers formed a similar credit card standard known as JEIDA. For a while these two competing standards slugged it out for dominance in the market place. But after a while common sense prevailed and both parties put away their war chests, took out the peace pipes and sat down for a pow wow. The end result, after much puffing, was that PCMCIA and JEIDA should be compatible formats, and so to this day such cards are known as PCMCIA/JEIDA compatible.

The common sense of this approach quickly caught on, to the extent that PCMCIA now has some of the biggest names in the computer industry supporting it. Apple, Hewlett-Packard, IBM, Intel, Microsoft, Sony and Texas Instruments are just a few. More recently, both Commodore and Atari have jumped on the band wagon. Atari use PCMCIA in their compact little hand held, the Portfolio, whilst Commodore use PCMCIA technology in the A600 and A1200.

The PCMCIA standard denotes the physical dimensions of the cards and how they are addressed, i.e. the interface characteristics. This allows you to take a PCMCIA card from a PCM-

Smart Cards

CIA device and use it on your Amiga. Or that's the theory of it anyway. In practice there are several problems.

COMPATIBILITY

You can't, for instance, take Portfolio Chess and play it on an Amiga – alas we still have to wait for the first mutually compatible Atari and Commodore systems. Neither can you play *Lemmings* or *Zool* on Psion organisers!

But why not? They are after all PCMCIA compatible. The answer lies in the contents of the cards. Whilst PCMCIA determines how to talk to the cards, it doesn't specify the language that you're communicating in. It's like being able to wave a flag, but not knowing which flag to wave.

Each system, be it an Amiga, a PC or something else, talks in its own particular language and nothing but system X will run system X's software. So, you can't go out and buy a PCMCIA card with software on it and expect it to run that software. Neither can you by HP LaserJet font cards and expect to use the fonts! So, just what can you do?

Well, given that the PCMCIA interface is two way, i.e. it can both read and write to cards and at reasonable speeds PCMCIA would seem like a reasonable storage medium. In fact both RAM and 'floppy disk' equivalent cards are already available.

Standard RAM cards, known as Psuedo-RAM PCMCIA cards, have actually already been announced by several Amiga suppliers, including Silica, Calculus and Hi-Que. These work just like normal RAM, increasing the Amiga's memory to 2 and 4Mb. However, and it's an important however, the minute you remove the card or turn off the Amiga everything they contain is lost, they are not what used to be termed 'off-line' storage.

OFF-LINE STORAGE

For off-line storage you'll need S-RAM cards. These are battery backed and can be used just like disks – in fact, the Amiga's Workbench contains a special utility to format them! S-RAM cards have been around for some time on palmtops (one of the original uses of smart cards) because some systems don't have space for normal disk drives, but obviously need some kind of walk away storage.

You may wonder why, if S-RAM cards already existed, these weren't the first announced for the Amiga. The answer is a simple one revolving around expected use. Amigas don't need another disk drive like palmtops, but do need additional RAM. Psuedo-RAM cards provide such extra RAM. Most Amiga users are also more sensitive to price and there is a difference between the two types of card. You'll need a credit card to buy an S-RAM card as they cost considerably more than the Psuedo-RAM versions. Whilst you can pick a 2Mb Amitek card for around £119, the equivalent S-RAM card would cost £249!

The next problem is that not only is the software on the cards incompatible, thus resulting in you only being able to use the hardware of the cards, but this too is also about to change. Just like any computer orientated product, PCMCIA is constantly undergoing development. The original version 1 standard for instance has since been replaced by... yep, you guessed it, version 2. This is the current standard and is used in the new Amigas. The difference between these two is the physical height of the card. This was apparently done to enable more advanced peripheral cards to be plugged in!

In the future another version is planned. This will build upon the I/O advantages of the technology and allow developers to produce things such as Ethernet network and LAN cards, SCSI controllers, fax and modem interfaces, etc. Whilst some of these products may seem strange to Amiga users, they are important for the other users of PCMCIA technology – such as laser printer and palmtop hardware. Imagine, for instance, a laser printer that can be expanded with its own hard drive simply by plugging in a smart card! Sadly, however, the Amiga's version 2 interface will not be compatible with these version 3 products, which is a downer for all concerned.

Another problem, but not as significant is the difference between the CDTV smart cards and PCMCIA cards. Despite their similarity in size and shape, the two card types are in fact different and cannot be interchanged. The CDTV cards are a proprietary format, designed primarily for RAM expansion. This is unlikely to be a major problem for you and me, but rather a pain in the neck for developers who will have to spend their resources developing the same product for the same architecture on two different formats. Quite what Commodore had in mind when they made the decision to use two different format card interfaces is anyone's guess, but they must have had their reasons and aren't known for making dumb decisions – do they know something we don't?

FORWARD THINKING

So what's the future of PCMCIA on the Amiga? Well, for a start, the initial batch of Pseudo-RAM cards are just a start. Whilst the next generation of PCMCIA (version 3) peripherals may not directly work with the current Amigas, you can be sure developers will have something to offer instead.

Whilst no one was prepared to comment directly at the time of writing this article, industry sources I spoke with did suggest that we're likely to see a range of interfaces on PCMCIA cards fairly quickly. Following this, many of the major Amiga developers have expressed interest in PCMCIA and are already researching possible expansion routes.

All in all, PCMCIA will bring new many new peripherals to the Amiga, and do so in smaller sizes than ever before. More importantly, as PCMCIA's influence in the PC market increases (and with names such Sony, IBM and Texas behind it this can't be avoided) we should see some really interesting new developments making their way to the Amiga! As the saying goes, watch this space....



One of the many games on PCMCIA cards the cannot run on the Amiga.



Despite first appearances, the Psion Series 3 cannot run Amiga games.

JARGON BUSTERS

S-RAM – Static RAM. This behaves as normal RAM but is non-volatile and thus keeps it's data after the host machine is powered down. S-RAM is also slightly slower than normal RAM or pseudo-RAM.

JEDIA – Once a competing standard in smart cards, this Japanese alternative is now compatible.

Pseudo-RAM – Ordinary, volatile RAM, which behaves in the same way as the Amiga's own RAM.

Ethernet – A networking standard which enables many desktop machines to be joined together and share facilities, such as printers and hard disks.

LAN – A local area network. Ethernet is a LAN system.



Epson GT 6500

The GT6000 caused a sensation in the Amiga world when ASDG's software driver was released for it. What is so different about the latest model? Nick Veitch interpolates the answers.

PRINTER TECHNOLOGY

Epson are perhaps better known for their fine range of printers, but they are also heavily involved in optical technology. The original GT6000 scanner (known as the EC3000 in the U.S.A. for some reason) was simply the best 600 dpi 24-bit scanner available for the Amiga when we reviewed it last year.

In the meantime Epson have not been idle. The GT6500 is a complete replacement for the old GT6000, and yet, remarkably, is a lot cheaper at only £930 for the scanner unit on its own.

RESOLUTION

The scanner is capable of achieving optical resolutions of up to 600dpi, or 1200dpi through interpolation. Many people harp on about the pixel resolution of a scanner, but for everyday desktop use 400dpi is quite sufficient, never mind 600dpi, especially in 24-bit colour. The difficulty with 600dpi images in full colour is that they take up an awful lot of memory.

This resolution is easily good enough to pick out detail in a photograph and will usually return results almost as precise as the print itself. Problems occur when attempting to scan an image which has already been through a screening process (such as anything that has been in a magazine or newspaper).

The scanning mechanism itself is much faster than the original, and uses slightly more intelligent head passes than its predecessor. All the controls have been relocated to the front of the unit including the power switch which is a bit of a bonus.

The software is supplied both as a module for use within *Art Department* and as a stand alone program. If you do have *ADPro* it is still worthwhile keeping both, as you will be able to scan larger images with the direct to disk software. The disadvantage with missing out *ADPro* is that you never know what your scan turned out like, and if it's that big what software are you going to be able to load to have a look at it.

The software drive is in fact the same as the one used for the original GT6000. Because it was written to take advantage of the intelligent interface on board the scanner, it can automatically determine which options are relevant to use with either of the scanners you choose to connect.

Unfortunately this also means that the scanner suffers at the hands of the software as much as the original did. Although plenty of options are given, and colour correction can be better handled in *ADPro* anyway, the brightness controls are a bit of a let down. With only seven levels it is not nearly accurate enough to control the scanner in monochrome mode. When scanning line-art, the brightness effectively controls the threshold of the scan. Often there is a fine point between lighter parts of the artwork and darker areas of smudges or shadows on the paper, so a percentage controller would be much more useful.

OPTIONS

The GT6500 can be expanded to accept transparencies too. Instead of a large tray and carriers, as so many of the older scanners use, the GT6500 can make the change simply by changing the scanner lid. Transparencies can then just be placed on the scanning bed and treated just as if they were prints.

CONCLUSION

An excellent piece of equipment at an incredible low price considering the performance it gives. The software support is lacking in a few areas but this is more an annoyance than a limitation. Unless you are planning on producing a glossy magazine to rival 'Vogue' you'll never need another scanner.

JARGON BUSTERS

Dpi **– Dots per inch, a measurement of the optical resolution of an image (e.g. Amiga screen is approx. 72 dpi).**
Interpolation **– this is where a 'best guess' is made between two certain values. In image technology this means that the graphic has been doubled.**





Even at low resolution the images look detailed because of the 24-bit colour information.
Monochrome mode is great for line-art, but the threshold settings don't allow you to acquire all the detail.

EPSON GT6500

. . . a t a g l a n c e

• 600dpi true optical resolution • 24-bit colour images or 256 grey levels • Scan straight to disk or via *Art Department* • May be used as photocopier (when attached to printer) • Excellent software support • Adjustable preview scans and scaleable resolutions • transparency option.

Address book: DMI plc., Unit 3, Poyle 14, Newlands Drive, Colnbrook, Berks. SL3 0DX. Telephone:0753 686000. Epson are on 0442 61144

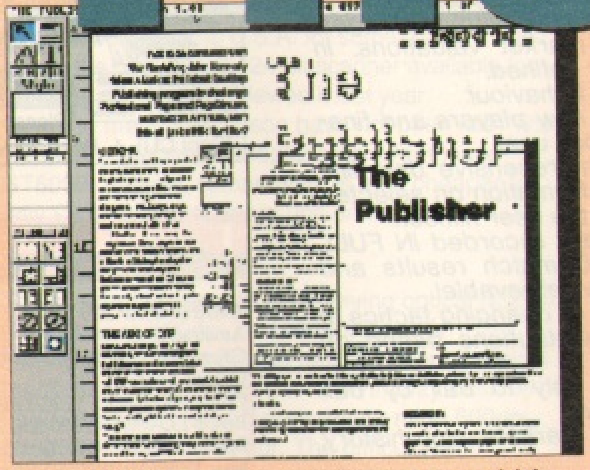
EPSON £930

'Impressive results with no experience necessary.'

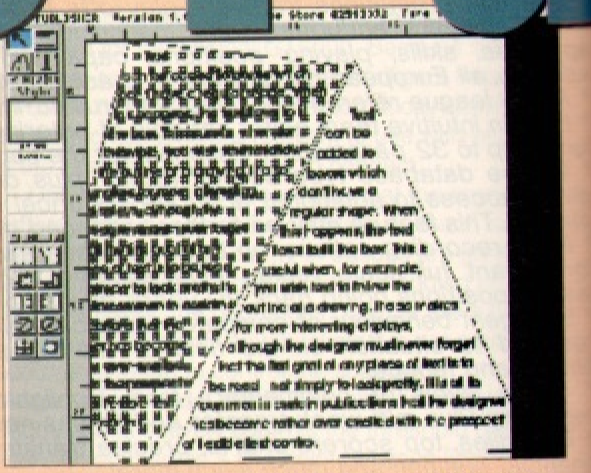
EASE OF USE	96%
VALUE FOR MONEY	94%
EFFECTIVENESS	93%
FLEXIBILITY	88%
INNOVATION	80%
OVERALL	**90%**

Not to be confused with The Punisher, John Kennedy takes a look at the latest desktop publishing program to challenge *Professional Page* and *PageStream*. But hold on a minute, isn't this a little familiar?

The Pu



The high resolution, interlaced screen packs in as much information about your project as possible.



Flowing text into irregular shapes is no problem. Notice how *The Publisher* represents shades of grey.

GOTCHA

You can fool some of the people all of the time, but no-one will be fooled for long by this program's pedigree. If it isn't a cross between *Saxon Publisher* and *Saxon Script*, given a name change and miraculously changed software companies, then you can paint me pink and call me Nigel.

Now this isn't necessarily a bad thing, as both Saxon programs have received some jolly favourable reviews in their time. Sticking them together also provides some very useful features, as we shall see. Of course, you wouldn't know this from reading the manual, but as I've other things to say on that subject I can wait a paragraph or two before letting rip.

DESIGNER SOFTWARE

Any desktop publishing program worth its reduced sodium (that's salt to those who got lost there) allows complete control over how a page is laid out. The easier and faster it works, the better the program. *Saxon Publisher* held the prize for being the fastest of the big three Amiga DTP programs, and thankfully *The Publisher* has inherited its speed. The text whizzes onto the screen even faster than some other packages with their greeking options switched on.

Designing a page is something that takes years to master, so the best way to do it is to rip off someone else's design. Although not totally ethical, it's still the best way to grasp the concepts of design – what fonts to use, when to use pictures, how many columns and so forth. Until a certain Technical Editor finishes the definitive guide to DTP, the many overpriced books available in the Mac section of your local bookshop are no substitute for having a go yourself. You'll find there is nothing so critical as your own opinion, 24 hours after you've finished.

The Publisher allows pages of up to almost 20 inches square to be handled, so even the new, improved, bigger than A4 size magazine pages can be created with ease. You can use the column guides to neatly divide your page into workable units, but the limitations of the old *Saxon Publisher* soon appear – you'll have to add your own bounding boxes and perform all the links yourself.

Before anything can be added to a page, a 'bounding box' must be created to mark some limitations, whether text or graphics. These boxes organise the page, and although their outlines appear on-screen, they vanish when printed. The boxes can be re-sized or moved around, but the ability to place them off to one side for a moment (as is possible with Gold Disk's *Professional Page*) is sorely missed. You can assign common boxes to function keys to save time, but some form of key template would be necessary or you'll never remember which is which.

Once on-screen, a box can also have its shape altered in many exciting ways. This is achieved by adding extra 'hooks' to the box's outline which can be selected with the pointer and dragged to new locations. Even when the box has been warped into some very strange shapes, text and graphics can still be inserted. This provides for some very sharp control, if you don't mind putting the effort in.

WORDS

Getting words into a DTP program can sometimes be the most difficult part of the entire process. Not only does someone have to write them (a thankless and underpaid job in my opinion), but they have to be subbed (checked for mistakes) and squeezed into columns. Of course there are always too few or too many words, which means some more creative design is called for.

The Publisher will import many different forms of 'standard' ASCII text, and no matter what word processor or text editor used, you'll find one that suits.

Incidentally, when writing text specifically for *The Publisher*, you can add special codes to control the fonts and so forth. For example, by inserting '@B' in your copy the bold face option will be turned on, adding '@s' will select the type style and '@{' and '@}' will display open and closed quotation marks – a task which can upset even the most professional DTP persons. Making use of these 'imbedded' text commands can save hours of work.

When the text has been imported, it takes up residence in a small list over on the left hand side of the screen. To insert it into a boundary box, you must click on the box, then the text's name in the list. Flowing text into different boxes, for example into the three column boxes which make up the typical magazine page, is then a matter of clicking on each new box and the name in turn.

Graphics are added in almost exactly the same way as text, except that the concept of flowing a picture through linked boxes is a non-starter. *The Publisher* can load normal IFFs, 24-bit IFFs, EPS and DR2D (structured art) files and displays a quick'n'chunky representation, if you so desire. As several illustrations on display at once can slow down screen update times, you can elect to have all drawings temporarily replaced with a grey rectangle. By the way, an EPS file is an Encapsulated PostScript file, which could contain graphics, text or both and could have originated on either the Amiga, a Mac or a PC – EPS is one of the few recognised standards which actually works.

PLAYING TAG

With the text in the boxes, you can start to select the typefaces and sizes. Each page normally has several different styles, one for the headings, one for the subheadings and one for the main text – the body copy. *The Publisher* allows each style to be stored as a tag, so that you need only create the tag once and then define a block of text to be of the correct tag type. This method ensures that if you need to re-define the body copy to be a point size smaller, you don't need to change each word in turn – you only need to change the tag.

The Publisher comes with a wide selection (31 to be exact) of PostScript Type 1 fonts, widely regarded as the best available. They must be, for they come as standard with every PostScript compatible printer

JARGON BUSTERS

DTP – Desktop publishing. The art of producing terrible amgazines via computer without the usual interception of a typesetter. Most magazines and many papers are created this way.

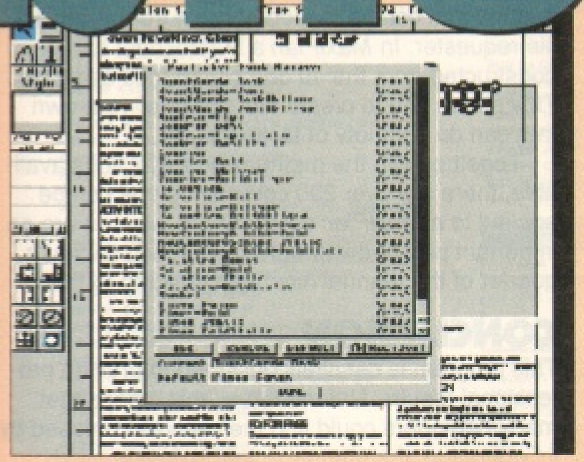
A4 – A standard page size, 297mm x 210mm.

Postscript – A page description language. Essentially this is to printing what structured art is to graphics.

Adobe Type 1 Fonts – Scaleable fonts designed for use with Mac and PC formats, but also compatible with some Amiga software.

VGA – Versatile Graphics Adaptor. A PC standard display, roughly similar to the A1200 and A4000.

blisher



Fonts are a DTP person's best friend. Here you have 31 Type 1 fonts, and if you can find more they'll integrate perfectly.



And what better way of showing off your work than with a DTPed business card.



Phew! Producing your own magazine is easy – spot any jaggies here?

– which is why they are supplied. If you get your mitts on other Type 1 fonts you can add them to the font list, but you will not be able to make use of the new scaleable Workbench fonts. Who could have imagined that simple things like type faces could cause so much hassle...

Included in the tag options are easy-peasy ways of adding drop shadows, outlines and textures. It's all so ridiculously easy that other programs should perhaps take note. For goodness' sake, there's even an automatic drop cap facility – something which kept Gold Disk going for years.

ANY COLOUR YOU LIKE

Since most home users (that's still you) will have a dot matrix, ink jet or perhaps even a cheap laser printer, the ability to control the colour content of a document is a bit of a luxury. *The Publisher* is a monochrome package, and the only colours allowed are shades of grey. This will suffice for many applications, and frankly if you can afford quality colour output you can afford a colour DTP package.

There are no colour separation facilities as a result of this Prime Ministerial colour scheme, which makes output that little easier to master. Ah output, that final goal of all DTP packages. To hold in your hand that sheet of A4 hot from the printer, that paper which has seen so many painstaking hours of your effort in the making... It all gets to you after a while I'm afraid.

All this talk of PostScript must have had you wondering whether or not your humble printer would be able to use *The Publisher*. After all, it does output ONLY in PostScript format, and not everyone (or anyone I know) can afford to buy a PostScript compatible printer. Fear not, gentle reader, for with a little cunning on the behalf of the programmers, every printer is now PostScript compatible.

MEANS AND DEVICES

Before you run *The Publisher*, you must remember to run a little program called Mount_Psc:, which is most easily done by putting it in the Workbench start-up drawer featured on post-1.3 systems.

This program creates a new logical device called PSC:, which can be used like any other Amiga device. You can print directly to it, copy files to it – whatever you like. The clever part is this: PSC: is a complete PostScript translator. Its job in life is to receive PostScript files, and translate them into the data which your printer prefers. So, for example, if like me you happen to have an old Citizen 120D which has seen a great many better days, you can still send PostScript files to it and have them printed with remarkable clarity. It has to be said that the results are very impressive, with the intelligent half-toning routines doing especially great things for graphics. Any image will be printed a lot better than with the default Amiga printer drivers. Of course, there is a drawback to this quality – translating a page like this takes time, and we're talking five minutes rather than five seconds here. A big page with 24 bit images can take large fractions of an hour to complete – an accelerated Amiga helps.

MANUAL CONTROL

The documentation which comes with *The Publisher* is very disappointing. A slim volume, it does little in the way of encouraging new users. It took me a good few minutes to work out which icon does what on the main screen, simply because the authors couldn't be bothered to include an illustration. Similar mistakes are present, and the entire work could have been rounded off with a comprehensive tutorial detailing all the features and even introducing some aspects of design. Unfortunately, it isn't.

CONCLUSION

The Publisher is very sturdy program, and is more than adequate for small DTP projects. The inclusion of Type 1 fonts and a PostScript translator ensures that whatever your printer, you will get superlative quality output. However, the program itself has limitations which should have been addressed with the hindsight of *Saxon Publisher*. When compared with a heavyweight such as *Professional Page* (now nearing its fourth incarnation), *The Publisher* starts to look a little too much like a John Bull printing kit for my liking. There are options for selection the screen mode, so it's unlikely you could cure the flicker inherent in the interlace display even with a AGA equipped Amiga and VGA monitor.

Nevertheless, for the newcomer *The Publisher* is a worthwhile investment – and as an introduction to high quality desktop publishing it is hard to beat.

DTP vs. WP

If you're wondering what's the difference between DTP and normal word processing, the answer is getting harder to define every day. Programs such as *WordWorth* have started to appear, and although they could be said to be highly advanced word processors, they also have a fair degree of page layout facilities.

And there lies the real definition – a DTP program allows a page or document to be designed from scratch. Columns, fonts, pictures – everything must be decided upon, laid out and changed to achieve the desired effect. A DTP program has be flexible enough to produce a business card one minute, a 60 page colour magazine supplement the next. That's real desktop publishing.

THE PUBLISHER

. . . at a glance

• Used to be *Saxon Publisher* in a past life • Comes with PostScript translator • Will work with floppy and hard disk systems • Vast amounts of memory not necessary • Fantastic quality output • Lacks design features

Address: The Disc Company, B.P. 40, 92101 Boulogne-Billancourt Cedex, France.

DISC COMPANY £49.99

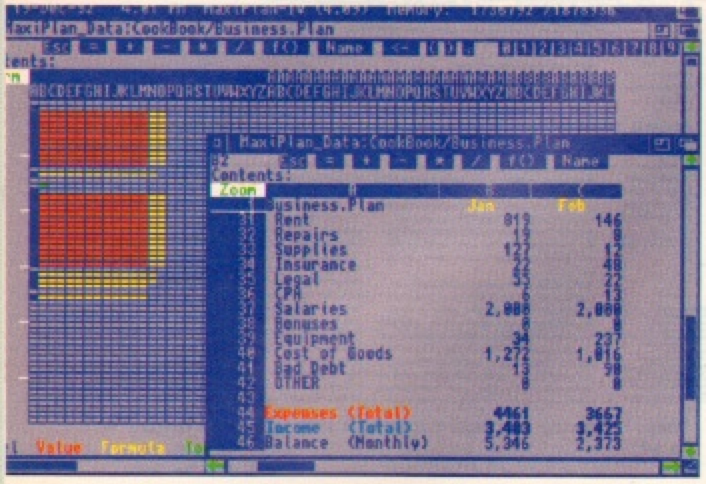
'Ideal introduction to DTP for the serious amateur.'

EASE OF USE	75%
VALUE FOR MONEY	88%
EFFECTIVENESS	85%
FLEXIBILITY	75%
INNOVATION	89%

OVERALL 89%

MaxiPlan4

MaxiPlan4 combines spreadsheet, database, and charting facilities in one. It now boasts of its Workbench 2.0 compatibility and Arexx support. Does it live up to the promise? David Ward investigates.



The spreadsheet can be displayed in two modes – zoom and normal. In zoom mode text is coloured blue, while data is red, and totals are yellow. The active cell is the green box.

WELL STOCKED

First impressions about this nifty little package are deceiving. It seems to be little more than just another spreadsheet but, in fact, it is a large and impressive piece of software, with over 400k of code squeezed on to the Program disk alone. This also doubles as a fully featured Workbench disk, so it comes as no surprise to discover that the manual recommends 1Mb of RAM as a starting minimum. A second disk contains a dozen examples, the 'req' file requester, and *MaxiPlan's* own special font called Intuitive. This also appears on the work disk, but is supplied here with an installation program for hard disk users.

In use *MaxiPlan* behaves just like any other currently available spreadsheet. Movement around the sheet is controlled by sliders or cursor keys. Text, formulae, and numeric data is entered via the keyboard in the usual fashion, but you can also use the mouse to select cells and mathematical operations to construct a complex formula. After this the similarities begin to diverge – as *MaxiPlan* can incorporate a database. Columns and rows can be set aside for the importation, or direct entry, of typical database information such as names and addresses.

SPEECH OPTION

As if that wasn't enough, there is also a speech option that echoes the data you are entering and reads back the contents of the cells. And then there are the macros, which are essentially a mini-programming language in their own right.

MaxiPlan, in common with other spreadsheets, can display the information in chart form. These range from the usual bar, line and pie charts, to the more unusual Gantt and Hi-Lo types. (A Gantt chart is used by company managers to layout the start and end dates of projects. Hi-Lo charts are used to track the share price of a stock on each day of a financial period.) It also has Word charts. , which are used to create a 'bullet slide', more commonly known as a title. Intersperse these among a variety of other charts and you can do a desktop presentation entirely from within *MaxiPlan*. Finally, it has an X-Y chart capability that can draw maps from co-ordinate data. Although I'm sure that this facility can be put to a better use than that.

Some charts have a 'point & modify' option which allows you to directly alter the position of a curve or bar. This will also automatically update the spreadsheet. If this is not wanted, or you want certain cells to have their values locked in, then you can Protect them. If they hold sensitive data then they can be Password protected to prevent unauthorised users seeing their contents.

A similar, but less secret, method is Outline. This operates on nine levels. When a cell has an outline of three, and the spreadsheet is set to outline level two, that cell is not displayed. Only when the level is three or more will it become visible.

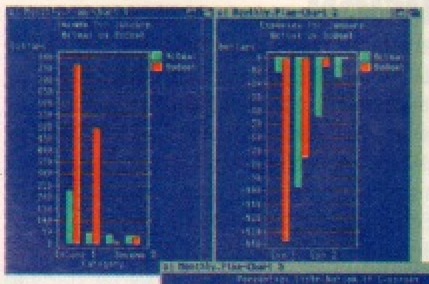
PRINT OUTS

Both the spreadsheet and charts can be printed out, the size of the chart being dependant on the preferences' settings rather than the dimensions of the window in which it appears. Thankfully, preferences can be called from within *MaxiPlan* via a pull-down menu.

There is extensive printer control from this menu, including the chance to output to a file, and to change font and line spacing. To see what your output is going to look like, there is a handy Print Preview command. Outline affects printout too, with higher levels than that specified not being printed. It also bars you from zooming the spreadsheet or selecting ranges of cells.

This zoom facility allows the user to get up close to the spreadsheet. In order to avoid confusion when using this tool, text and similar blocks of data are colour coded for quick identification..

Spreadsheet size is limited only by the memory capacity of your machine, but I am sure you would run out of data before you ran out of memory – even on a 1Mb system.



Positive and negative bar charts can be created. *MaxiPlan* allows 3D and stacking varieties too!



Plain and 3D pie charts can be constructed from inputted data. The former can be rotated, but only the latter can be exploded for improved presentation.

COMMON MACROS

MaxiPlan is claimed to be the leading program of its kind on the Amiga, so it should come as no surprise to find that it will load and save files in the format of the leading program for the PC – *Lotus 1-2-3.* The two programs have many similar features – multiple spreadsheets on screen, algebraic and time functions, cut and paste editing, database and graphs. They only differ in cost, a basic *Lotus* program starts at a £400 list price.

Another feature that they both share are named macros that can be loaded and run from a list in a file requester. In *MaxiPlan* a Macrosheet can be constructed from the 40 odd commands available. This allows you to create a program of your own that can do a variety of tasks for you.

Together with the mathematical functions available, there are over 200 commands that can be applied to a *MaxiPlan* spreadsheet. Macros are an important part of this program, so much so that a quarter of the manual has been devoted to them.

CONCLUSION

This program is definitely designed to provide professional results. Unfortunately, this means that many beginners could find themselves confused by its operation, the manual doesn't provide much help either as it quickly moves from 'how to enter data into the cells' to the more complex aspects of spreadsheet usage. That little niggle aside it can be truly said that *MaxiPlan4* is the answer to the prayers of the Amiga owning accountant.

DATA PRESENTATION

A major part of the work of managers, and finance directors, is the collection and presentation of data. In the past it was entered into vast ledger books, where rows and columns of figures were added up. If the total at the end of the last row did not match the total beneath the last column then the whole thing would have to be re-checked.

When micro-computers appeared with reasonable graphics capabilities, it was soon realised that an electronic ledger book could be created. In 1979 *VisiCalc* became the first ever spreadsheet program. It ran on the original Apple computer.

A spreadsheet program retains the original row and column format of the ledger book, but its power lies in its ability to remember formulae and calculations previously used.

It can make changes to the entire sheet, if just one entry is changed, in a matter of seconds. And being electronic it can be larger than is physically possible with pen and paper.

MAXIPLAN

. . . a t a g l a n c e

• Professional quality spreadsheet • Database functions • Extensive graphic capabilities • Mighty macros • Limited only by memory • Weighty manual

Address: The Disc Company, B.P. 40, 92101 Boulogne-Billancourt Cedex, France.

DISC COMPANY £49.99

'An effective business package for budding accountants.'

EASE OF USE	75%
VALUE FOR MONEY	80%
EFFECTIVENESS	90%
FLEXIBILITY	80%
INNOVATION	60%
OVERALL	**81%**

YOU LEARN SOME NEW EVERY

NODDY'S PLAYTIME
Jumping Bean £25.99

In the world of children's games, can any license be as sought after as the Noddy one? Well, yes probably. I don't know about you, but from where I'm standing Noddy's a little old hat. Still, that didn't stop the Jumping Bean picking him up and sticking him in quite an inventive piece of software.

Aimed at children between the ages of three and eight, *Noddy's Playtime* aims to teach basic skills, such as picture recognition, along with some simple logic abilities. This is done through a series of eight games, based in various buildings around Toytown. In the farm, you have to match the front and rear ends of animals so that they'll get fed. In the factory, you are shown five similar items and a picture of the kind you want, e.g. an ice cream with a red cherry but no wafer. Using the mechanical crane you have to knock off any wrong items.

The whole thing is linked by Noddy driving around Toytown, and this is full of nice little keyboard touches, such as pressing the 'B' key causes the car to brake sharply, complete with sound effect. However, this is where I think things might be a little too much for younger children. It's a large map, and you're given no indication of where the games are. You can choose to skip to the games, but that removes the continuity. Other than that, it's a fine piece of software, and one stimulating enough to capture the imagination of the older end of the age group.

75%

PAINT AND CREATE
Europress Software £25.99

This is a superb piece of software, and one that no five year old should be without. Rather than trying to teach children, this package aims to stimulate their imagination with a collection of games designed to aid creativity. Put together by the *Fun School* team, you'd expect it to reek of quality anyway. And it does, with polish liberally slapped all over it.

The menu is a large four-screen picture, filled with objects that animate when you click on them, such as the sun, a cat, a dog and a telephone. The games themselves are easy to find – to play jigsaw you click on the teddy piecing together a Jigsaw. The large bright graphics are something smaller children will identify with, and I feel that the package could be just as useful for children younger than the five years recommended.

As well as Jigsaw, you've got a mini art package for budding Leonardos, a Monster Maker, where you can put body parts together to create the scariest monster possible, and then run a little animation to see how scary it really is. There's a Card Creator, where you can piece together Christmas/Birthday cards and then print them out, but my favourite has to be the Teddy Karaoke. Here you can put a band together by picking the instruments and musicians to play them, select the music for them to play, and then put them on 'Top Of The Teds' to see how well they do. Essential software.

94%

SPELLING FAIR
Europress £25.99

It's well known that spelling is a major problem with school children, and particularly the spelling of certain words like 'weird' and 'ceiling'. This selection of useful games aims to help that particular problem, using a fairground setting for the tests.

Starting with the Coconut Shy, you are shown a selection of letters on the front of coconuts, within which is a word. At the bottom of the screen you are shown the meaning of the word, and you have to knock off the extra letters leaving only the required ones. After that there's the Word Juggle, where two jugglers rearrange letters to form words; the Mechanical Grab, where you can practise prefixes and suffixes; and even learn about homophones (words that sound the same, like 'Where' and 'Wear') in the Haunted House.

Each game is played across three levels of difficulty, and offers small bonuses for success as part of an incentive package. For example, in the 'Test Your Strength' game, after four bells have been wrung people step out from behind the posts and burst into applause. Similarly, in the coconut shy, the coconuts dance when you get words right. Get things wrong, and you get to see an amusing animation, but this is done in a way that isn't disheartening.

All in all, it's a well put together package for the slightly older group (7 to 13), and it tackles the problem well. Once again, it comes from the *Fun School* team, so it can't be bad!

84%



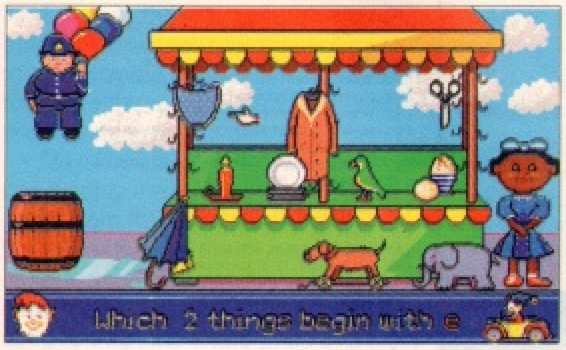
Between games, Noddy has to drive around Toytown. You don't have to run people over, but it sure is fun!



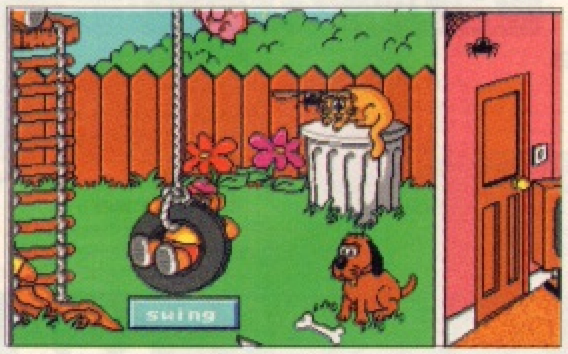
The Teddy music maker – one of the most entertaining games Paint And Create has to offer.



The Coconut Shy shows you a selection of letters with a word hidden somewhere within. You have to find the word!



Just one of the many Noddy games. In this one, the player has to find all the objects starting with the letter 'E'.



Paint And Create's novel menu system teaches simple reading by displaying the name of the object along with a mini-animation.



By clicking on the correct plural term, you get the strongman to ring the bells.

THING DAY

This month we take a look at five new packages aimed at the very young user. Tony Dillon looks back to the days of short trousers and runny noses – it's nice to see that he hasn't changed.



MERLIN'S MATHS

Europress Software £25.99

The third *Fun School* special to appear this month is *Merlin's Maths*, written completely in AMOS, supplied on four disks and designed to explain basic mathematic fundamentals in an interesting and entertaining way. The setting is Merlin's castle, with its six main rooms each of which has particular tasks to complete.

In the Perfect Potions room, you have to complete some addition and subtraction puzzles to turn a puny knight into a magnificent warrior. The weapons room explains the basics of weight, along with a touch of multiplication. The Magic Machine shows how formula and equations are used, as you collect all the data you can and try to fill in the missing parts of the sum.

As with all the Fun School specials, the games run on a reward basis. For every question you get right, you are rewarded with a little animation. Get a series right, and you are given something a little bigger. For example, in the Conference room, for each question you get wrong, one of the three torches blows out. Should all three torches go out, Merlin will run as the Vikings storm the window.

It doesn't cover as many topics as, say, ADI Maths, but then again it is aimed at a lower age range. If all you want to know about are the more basic mathematical functions, then this is fine.

A specialised package, but well executed. If your child is having trouble with maths, then this is the product for them.

79%



In perfect potions sums must be answered correctly to build the wimpy knight into a true blue fighting machine.



Merlin's castle, complete with its magical maths rooms, each of which is designed to teach you a particular skill.

PLAYDAYS

Alternative £25.99

One of the joys of being a freelance journalist is that you can actually spend your mornings watching programs like Playdays, née Playbus. Generally regarded as the successor to Play School, Playdays is full of all those little games and songs that children just love to join in with. Needless to say, the software is exactly the same.

Aimed at the young end of the market (3 to 8) this package differs from the others here, in that it provides the user with a series of games, rather than giving them some sort of selection. The games are chosen randomly from a selection of 13 different titles, all created to help the progress of a variety of skills from counting and spelling through to word recognition and observation, so the package is different every time you load it.

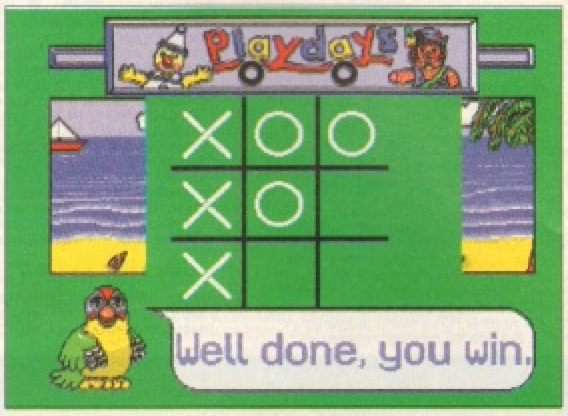
On the whole, the games are extremely simple, and very brightly presented, although without some of the spit and polish of the *Fun School* series. The game itself is hosted by Why Bird, a regular character from the show, who encourages and helps all the way, congratulating emphatically with every success and giving full explanations whenever the user fails in a task.

Kids who watch the show will love it, and it has enough educational content to make it worthwhile. An impressive product.

81%



Playdays lets you enter your name, so the child has all the congratulations directed to them.



Noughts and Crosses – Playdays style. A simple game that teaches logic and planning, and it isn't too easy to beat.

ADI FRENCH

Europress £25.99

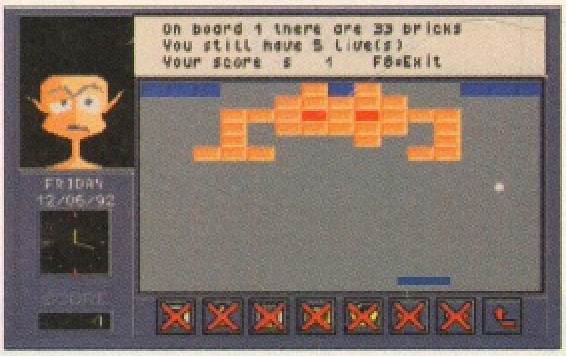
As you may remember, ADI was an experiment on the part of Europress to educate above the *Fun School* age, reaching into secondary education. ADI Maths and ADI English were both excellenty received, and so ADI now adds French to its repertoire. Using the same system of varied questions and mnemonics, ADI works more towards helping children remember French words and phrases, rather than try to teach them from scratch. For example, instead of giving you a list of new phrases to learn, ADI revises what you should have already been taught, by asking you to fill in missing words or answering simple queries. For example, when should you use the prefix 'Ille' as opposed to 'Elles'.

The presentation is, as always, excellent with the character of ADI constantly present in the top left corner. As you improve, he'll drop in the occasional word of praise, get something wrong, and he'll remind you that you can ask for help at any time. In that sense, ADI takes over the role of the teacher, leaving the more difficult problems to be solved in the classroom.

I would have loved something like this when I was learning French, aged 11. It really does help your understanding of the language by letting you experiment with it, in much the same way that you would were you speaking it to a native. Not entirely essential, but for most it's a vital learning aid.

89%





Let the cute alien, ADI, guide your child through the intricacies of a foreign language. Oh, and play a few games as well.

Look out for the CLR logo!

United Public D

The innovators

THE BEST SELECTION OF PD IN THE UK !

GAMES

PG003 AIR WARRIOR Good flight Sim +
PG006 ANTEP & SLOT CARS role playing game+ Y
PG008 ASI 1 Tanx, Rollerpede, Avatris Amigoids etc+
PG009 ASI 2 Invaders,Bally 2,Missile command etc!+
PG010 ASI 3 Megaball & Drip Superb !+
PG011 ASI 4 Frogger Go Moku,Cracker Jumpy etc!+
PG012 ASI 5 Raid, Go Looly & Retaliator+
PG013 ASI 6 Pacman Downhillchallenge Welltrix etc!+
PG014 ASI 7 Moonbase, Trix,Nightworks Clauderunner!+
PG015 ASI 8 Airace2,Hball,Snakepit & Numberfumbler!+
PG016 ASI 9 Features Battle pong & Blizzard! +
PG017 ASI 10 Escape, Pipeline, Pickout & Sys!+
PG018 ASI 11 Dad, Connex,Reversi Towers & Trippin+
PG019 ASI 12 Llamatron, Car, Powerpong. Fab!!+
PG020 ASI 13 Twintris, Squamble,Block it,Ball etc!+
PG021 ATIC ATAC Really playable ! + Y
PG024 BLACKJACK Good card game !+
PG026 CASTLE OF DOOM Excellent! Get it + Y
PG028 COLOSSUS & WORLD Fab adventures !+ Y
PG029 CROSSWORD COMPILER As it says !+ Y
PG032 DRAGONS CAVE D&D style game Mega+ Y
PG034 ETERNAL ROME Strategy & DOMINOES+ Y
PG046 HACK Great text adventure-infocom style! +Y
PG047 HOLLYWOOD TRIVIA Nice Trivia Game! +
PG048 HOLY GRAIL One of the best Text adventures+ Y
PG051 KILLER CARS Great filed vectors game!+ Y
PG053 LARN A superb text adventure game + Y
PG059 LORE OF CONQUEST space trading D&D game Y
PG062 MENTAL IMAGE 1 Gridrunner invaders & rebound+
PG068 NO MANS LAND Hi tech war game-shoot em up. +Y
PG071 POM POM GUNNER Like beach-head on the 64+Y
PG072 PROPERTY MARKET Become a millionaire !!!
PG074 RETURN TO EARTH Elite space trading game! +Y
PG076 SEVEN TILES Speedball type game-MEGA!
PG079 SEALANCE A submarine strategy game +Y
PG080 SERENE Good quality shoot up!+Y
PG081 SERENE II Follow up to the above game +Y
PG085 STARFLEET Nice game done in SEUCK!+ Y
PG094 TRAIN CONSTRUCTION KIT make own tracks+Y
PG101 THE INSIDERS CLUB Stocks & shares game
PG105 WIZZYS QUEST Fab arcade adventure game!+Y
PG108 ASI 14 ChinaChallenge2 & Amiga Columns!+
PG110 SUPER SKODA CHALLENGE Nice car racegame!+Y
PG121 A500+ GAMES PACK 21 games to run on a plus+Y
PG124 TOTAL WAR Great new Risk type game,ok plus!+Y
PG127 AIRMANIA Super platform game from Addware + Y
PG131 ATLANTIS A nice looking strategy game! +Y
PG132 ASI 15 Battlecars Lettrix & Mambamove!
PG133 ASI 16 Wastelands, Mission X, Pacman +
PG134 ASI 17 Tomcat, Defenda, Jetman Bugblaster+
PG135 ASI 18 Henry in Panic Skyflyer Omega race!+
PG136 ASI 19 Growth,FranticFreddy,Biplane & more!+
PG138 BATTLE OF BRITAIN & WAR strategy war games+Y
PG139 DUNGEONS OF MADROJ Excellent D&D game+Y
PG140 MIND GAMES Stacks of fun with this !Y
PG141/3 SWORD OF WARLOCK RPG adventure 2drives
PG146 ASI 20 Microbes Hollywood trivia Coin drop +
PG149 A NIGHT AT THE TOWN Witty text adventure+Y
PG153 WAR very good strategy/arcade game+Y
PG155 ASI GAMES 21 Zeus Tettrix Battlements Dragntiles+
PG156 ASI GAMES 22 Lemmingoids,Wizzys quest Duel etc+
PG157 ASI GAMES 23 Quick money,BIP,Interferon Arcadia+
PG164 GAME TAMER 2.3 joystick tester & 258 cheats+Y
PG166 RAID III Wicked new shootemup !!!! +Y
PG167 SERENE III From the author of Raid !!!+Y
PG169 ASI GAMES 24 Revenge Dux Croak 3d maze etc!+
PG170 ASI GAMES 25 Mr Brick,Copper,hemeroids,E. Type+
PG171 ASI GAMES 26 Superpacman 92 Smash tv Ashido
PG172 ASI GAMES 27 Addictive card games. Really good!+
PG174 AMOS CRICKET Shareware cricket game,1 or 2plr+
PG175 SPACETRAX 2 player shoot each other up game+Y
PG176 TECHNOBAN GAME Quite a nice puzzle game! +Y
PG177 HELLZONE Stunning R-type clone-GET THIS! +
PG178 MENTAL IMAGE 2 Three Excellent new games +
PG180 SECTOR 1 A nice game similar to alien breed+Y
PG181 STRIKEBALL Baseball type game done in Amos +Y
PG182 ETHOS Simple graphical adventue Sinbad style+Y
PG183 CATACOOMBS great D&D style game. VG.GFX +Y
PG184 FATAL MISSION Very good Shootemup game +
PG186 ASI 28 Doody, DrMario, Invaders2, Madbomber2+
PG187 ASI 29 DOG, Rome, Nova, B-Bal, Atax, Quadrix+
PG188 ASI 30 Bounce & Blast, Total Fire Tank attack!+
PG189 SPACE RESCUE Super scramble like shoot em up!+
PG190 TOP SECRET An exellent quality platform game!+
PG191 ACT OF WAR New space strategy game! +Y
PG193 MASHIE NIBLICK Yes,a golf game for your Amiga+Y
PG195 KLAKTRIS Suberb quality tetris type game!+
PG197 ANDYS AMOS GAMES 6 good games on here!+Y
PG198 AIRPORT Now you control an airport! +
PG199 CASHFRUIT Nice fruit machine game! +Y
PG200 ALL ROUNDER CRICKET New cricket game!+Y
PG201 APPLE CATCHER Simple fruit collection!+Y
PG202/3 IRON CLADS Good strategic war game!(2)Y
PG204 THRALLBOUND Text adventure with graphics!+Y
PG205 SOCCER CARDS Football managing game!+Y
PG206 ASI 31 Arazmaz,Crazy pipe, revolution etc!+
PG207 ASI 32 Blob, Sector one & Firefighter! +
PG208 ASI 33 Hyperball & War! +
PG209 ASI 34 Trailblazer, Yelp, Qbic Rushour! +
PG210 ASI 35 Poing, Snakepit, Cybernetix etc!+
PG211 ASI 36 Mother lode, Wonderland, Kong etc!+
PG212 ASI 37 Klaktris, Ghostship, Paccer etc!+
PG213 ASI 38 One on One,Baldy,Skyflyer2,Transplant!
PG214 LEGEND OF LOTHIAN Superb Ultima type game!!+Y
PG215 ASI 39 Lots of card games on this disk! +
PG216 ASI 40 Disk full of sliding puzzle games!+
PG217 ASI 41 Pacman deluxe, Hellzone Leap II etc+

EDUCATION

All ok on A1200!
PE001/5 EDUCATION SET science programs for ages 11+ +
PE006 KIDSPAINT Fab little talking colouring book+
PE007/8 LEARN & PLAY Maths, spelling etc. 5-10 yrs +
PE009 STORYLAND 2 Save toyland from the witch! +
PE010 TOTAL CONCEPTS ASTROMOMY Book on a disk.+
PE011 TOTAL CONCEPTS DINOSAURS Book on a disk+
PE013 SIMON & SPACE MATHS Talking maths program
PE014 SPANISH, FRENCH, GERMAN TUTOR Translator +
PE015 TREASURE SEARCH find the lost treasure ! +
PE016 COLOUR THE ALPHABET learn letters & colours! +
PE018 TYPING TUTOR, Superspell Budget & Mscalender! +
PE019 DUNKS DTP A sort of DeskTopPublisher for kids +
PE020 MATHS DRILL Good maths disk for the young! +
PE021/4 SCIENCE Very good four disk set!+ (4)

BUSINESS

All ok on A1200 except PB006!!
PB001 AMICASH bank management program+
PB002/3 ANALYTICALC Superb spreadsheet!+ (2)
PB004 ASI LABEL PRINTERS 3 of the best+
PB005 BANKIN control your cheque book! +
PB006 BUSINESS CARD MAKER Nice program+
PB007 CLERK Complete accounts package+
PB008 DESKTOP PUBLISHER Simple to use +
PB009 FLEXYBASE DATABASE Address keeper+
PB010 JOURNAL Keep track of finances
PB011 MISC.BUSINESS Geotime, Grocery list, Calc
PB012 QBASE Simple 8 field database
PB013 QED Simple & effective text ed+
PB014 RIM DATABASE Fully relational !!+
PB015 TEXTPLUS V3.00 The BEST Wordprocessor +
PB016 UEDIT ISSUE 3 NEW VERSION Text Editor+
PB017 VISICALC SPREADSHEET Simple to use+
PB018 WORDWRIGHT Wordpro with spellchecker! +
PB019 BUSINESS LETTERS contracts, letters + more+
PB020 TEXT ENGINE 3.4 NEW Version !!! +
PB021 AMIBASE PRO. Powerful easy to use Dbase +
PB022 BBASE II v5.5 A fast & easy to use database+
PB023 FORMS REALLY UNLIMITED form creation prog+
PB024 LAST WILL & TESTAMENTS Just in case !+
PB025 EDWORD Brand new wordpro - V.good +
PB026 AGRAPH Superb Program graphing data +
PB027 BOILERPLATE Business letters & Wordpro +
PB028 LITTLE OFFICE Intergrated Wpro,Sst,Dbase,Gfx+
PB029 ADDRESS PRINT Good label printing program! +
PB030 THE MONEY PROGRAM Home accounting! +

UTILITIES

(Note: "Y" = ok on A1200!)
PU002 A-GENE Good geneology program + Y
PU004a/b A64 EMULATOR NEW VERSION 2.0 (2)
PU005 AMATEUR RADIO 1 Interest to radio hams + Y
PU010 ARP 1.3 Amigados replacement project! +
PU012 ASI GRAFFIX UTILS graphics convertors etc+Y
PU013 ASI BOOT UTILITIES bootblock utilities + Y
PU015 BIORYTHMS, STARCHART 2 Good programs+ Y
PU021 C-LIGHT RAY TRACER Good program+ Y
PU022 CHEMESTHETICS molecule displayer + Y
PU036 CURSER BASIC COMPILER Just what you need!+ Y
PU037 D-COPY The best PD disk copier & more + Y
PU039 DBW The forerunner to Skulpt 3D !!! + Y
PU040 DEMOLISHER 168 UTILTIES - MEGA !+ Y
PU047 DOPE INTROMAKER Make your own intros+
PU048 DYNAMITE FONTS II CutNPaste fontscreens Y
PU049 DYNAMITE FONTS More CutNPaste Fonts Y
PU055 ELECTROCAD DEMO circuit designer +
PU056 EXILE FONTS Excellent CnP fonts+
PU058 FONTS AND RAM MANAGER BIG video fonts+
PU059 FONTS & SURFACES Backdrops & fonts+ Y
PU062 GRAPHICS UTILITIES Various misc. programs+Y
PU063 HAMLAB Convert VGA PC >IFF/HAM + Y
PU064 HARDDRIVE UTILS MRBackup & FixDisk & more+Y
PU065 ICONMANIA Program icons & more !+ Y
PU066 ICONS Cramm packed with icons !+ Y
PU067 IMPLODER V4.0 Megacrunching Util+ Y
PU071 JR COMM 1.02 Modem users comms package Y
PU072 METALLION UTILS Font Editors & more utils+ Y
PU073/76 KING JAMES BIBLE Old&New testaments (4)+ Y
PU078 M-CAD Hires design package. Excellent + Y
PU080 MESSY-SID Read/Write PC Files, Brilliant!+ Y
PU083 MORSE PROGRAMS for the radio hams. Y
PU086/7 NORTH C 1.3 (2) Complete C compiler & libs+ Y
PU088 NORTH C 1.3 This is the packed 1 disk version!+Y
PU089 PASCAL COMPILER needs good CLI knowledge+ Y
PU091 PENDLE 200 MEGAUTILS An essential collection+ Y
PU095 PRINTER DRIVER GENERATOR & new drivers+ Y
PU096 PRINTER DRIVER UTILITIES Various utils etc. Y
PU097 PRINT STUDIO V1.25 Prints pics & text etc.+ Y
PU108 ROT A simple 3D drawing package.Very popular.+Y
PU109/10 (2 disk) Structured clipart for Ppage + Y
PU112/3 SOMETHING FOR NOTHIN Video Utils&Fonts+ Y
PU115 ST EMULATOR Run Atari ST software !! 2 Drives
PU117 SUPERKILLERS Virus Killers! You need this! +
PU121/2 TV GRAPHICS Dpaint backdrops&Fonts+(2) Y
PU124 ULTIMATE ICONS Iconmaster,Iconlab,+ Y
PU129/30 VIDEO APPLICATIONS Video utilities+ Y
PU136 ZX SPECTRUM EMULATOR Now with sound +
PU139 GRAPHICS CONVERTERS PC>AMiga gfx Converter
PU140 LITTLEBENCH File copier & utils Dos2 only
PU141/2 TAROT II Learn about your stars !+ Y
PU143 OPTIUTILS 1 Crammed full ! Get it+ Y
PU144 OPTIUTILS 2 Get this disk too ! + Y
PU145 OPTICOMMS 1 Ncomm 1.921 Lharca, Zoo Arc+ Y
PU149 ELECTRONIC PROTOTYPER Veroboard designer Y
PU150 FOOTBALL LEAGUE ED Update league positions Y
PU151 BROTHERHOOD UTILS 1 Dcopy,Scenery,Qed +Y
PU152/66 CLIPART SET: 15 Disks of the BEST clipart +Y
PU167 MULTI-PLOT Superb data plotting program ! +
PU169 GELIGNITE FONTS CutNPaste fonts+
PU170 P-SUITE Disk magazine maker+Y
PU171 OPTICOMMS 2 Ncomm 2 & more +Y
PU172 WORDPOWER Solve Anagrams/Crosswords+ Y
PU174 ASTRO 22 professional astrology program! +Y
PU175 GELIGNITE FONTS II Excellent IFF fonts+Y
PU176 GELIGNITE FONTS III More of above!!+
PU177/8 BENCHMASTER Windowsbench & Messysid!!
PU182 STOCK ANALYST Technical analysis program+Y
PU183 AMYGEN Excellent geneology program+Y
PU184 PROCALC V1.0 professional calculator!
PU185/8 COSMOPOLITAN FONTS (4) Packed with fonts+Y
PU189 TRONIK VIRUS KILLERS 21 virus killers & docsY
PU191 LANDBUILDER fractal land generator+Y
PU192 SID 2 Get this ! directory util !!! MEGA!+Y
PU197 MOBED 2 Dpaint for Sprites & bobs+Y
PU198 VIDEO WIPES Masks & fades Dpaint 3/4 +Y
PU201 MALICE FONTS Excellent tiny fonts for Dpaint+
PU202 CYCLOPS Weird Plasma/fractal creator ! +Y
PU203 SCOPE 184 utils & clips for Ppage Y
PU205 PC TASK Wicked PC Emulator Get it !!! +Y
PU207 MULTISID Combine SID2 & Multidos(PC>AMIGA)+Y
PU208 ASI HANDYTOOLS 3 mega compilation of utils Y
PU209 FRED FISH CATALOGUE contains FISH 1 - 680 +Y
PU210 PCQ PASCAL Latest version of Pascal compiler+Y
PU211 AMIGA PUNT A horse race predicting program!+Y
PU212 PERM CHECK PLUS a pools prediction prog Y
PU213 RACE RATER Another horse racing program!! +Y
PU214 DIR WORK A Sid type file copying program! +Y
PU215 CAPTIONATOR Superb shareware video titling!+Y
PU217 BROTHERHOOD UTILS 2 utilities for the plus!+ Y
PU218 ORDER Excellent demo of commercial Dbase+Y
PU219 WBHACKS+ collection of hacks for + owners+ Y
PU221-225 8 COLOR ICONS Hundreds of new icons +Y
PU226/7 C-EYES FONTS For use in Dpaint, WB, etc.(2)+Y
PU228 PROBABLY RIPPER Create disks easily with this!+Y
PU229 JPEG 24 bit graphics compression util disk! +Y
PU230 MORE PRINTER DRIVERS new printer drivers!+Y
PU231/5 PAGESTREAM FONTS 5 disks super fonts!+ (5)Y
PU236/7 SCOPE197/8 Adobe type fonts, 2 disks full! +Y
PU238/9 M.O.R.C. Mouse operated rune caster,oracle !+
PU240 FREECOPY V1.4 powerful disk copying program!+Y
PU241 CALORIE BASE Useful for people on a diet!+Y
PU242 TEXTPLUS PROFESSIONAL 4 needs hard drive!+Y
PU243 ASPICE Circuit analysis program!+Y
PU244 BON APPETIT This is a recipe database program!+Y
PU245/256 C MANUAL Latest version on 12 disks! (12) +Y
PU257/61 PAGESTREAM FONTS 2nd set of fonts!+Y
PU262 RICHARD SMEDLEY COMP II Mortgages etc!+Y
PU263 LYAPUNOV Fabulous & unusual fractals!!+Y
PU264/8 OUTLINE FONTS For Pro pagev3 ONLY!!+Y

ANIMATIONS

PA031 BASKETBALL A basketball player 1 Meg! +Y
PA039 ERIC-S AMY VS WALKER Cute & sexy! 1.5M Y
PA040 ERIC-S BATMAN vs JOKER Very funny!!!+Y
PA042 ERIC-S COYOTE STRIKES BACK 1mg too! +
PA043 ERIC-S MORE AEROTOONS Very witty !!!+ Y
PA045 ERIC-S STEALTHY II Mig-29 vs Stealthy !+Y
PA046 FRANKLYN THE FLY Day in the life of a fly! +
PA048 GYMNAST ANIM Gymnast swings on bars! +Y
PA053/4 LIGHT CYCLES (2) Tron animation+
PA056 MAGICIAN II Good RT animation+Y
PA060 NEWTONS CRADLE RT animation +
PA065/68 REAL 3D (4) Superb of the program+ Y
PA072 THE JUGGLER A classic amiga demo!+ Y
PA074 THE WALKER vs The Helicopter - Mega !+ Y
PA075 THE WALKER vs A2000 A classic ! + Y
PA082 TIN TOY ANIMATION Ray traced tin soldier! +Y
PA085 JET ANIMATION Fractal Flight but better! +Y
PA086 FRACTAL ANIMATION full screen low flying anim+Y
PA090 TOO MUCH 3D Ship flys out of monitor!! + Y
PA091/3 GAS TURBINE, STEAM & PETROL ENGINE (3)+Y
PA094 AMY JOGS,WALKS & SNEEZES by E Schwartz! +Y
PA095 HOW TO RUN INTO A WALL by Eric Schwartz! +Y
PA097 SMALL STATION AT KHERNE New 1mg version+Y
PA098 EASTER ISLAND ANIM A nice fractal animation!+Y
PA099 ATF AGILITY new ES anim, very witty as usual+Y
PA100 VTOL CONTEST Check out this new ES anim ! +Y
PA101 DOLPHIN DREAMS Great Dolphin anim! + Y
PA102 BATTLE OF BRITAIN Amusing short anim!+ Y
PA103/4 KINGFISHER 2 Superb bird animations!+ Y
PA105 TOR ANIM Dog jumps out of screen!+ Y

AGATRON

All ok on A1200!
AGA01 RED LOTUS Spinning down the road. Fantastic !+
AGA03 STAR TREK - Shuttle fly past - Great ! 1m +
AGA09 STAR WARS - Fighter fly by, impressive 1m +
AGA10 STAR TREK - Enterprise in dry dock. Incredible+
AGA20 Huey 2 A helicopter leaving a landing pad.+
AGA21 ENTERPRISE DOCKING WITH SPACE STATION+
AGA22 ENTERPRISE APPROCHING stunning anim ! 1M +
AGA23 FLEET MANOEVRE Stunning animation! 1m +
AGA24 KULI PEN animation & Ping pong. Great! 1m +
AGA25 THE RUN , a suberb car chase 1mg +
AGA31 PORSCHE anim rising out of table ,1 mg. +
AGA33 PROBE Bird of prey animation & Klingonhit! 1m+
AGA35 SPACE PROBE, great anim of probe zooming off!+
AGA36 BIRD OF PREY, loop the lopp -animation 1m +
AGA37 TOBIAS GOES KNACKERS - Check this out ! 1m +
AGA38 TOTALLY WICKED ! Shuttle & Enterprise (2 MEG)

POWERANIMS

PP001/2 ANTI LEMMINGS (2) This is Brilliant! 2M
PP003 AT THE MOVIES Cute anim of Amy squirrel 1.5M+Y
PP008/10 BUZZED (3) Great anim of wasp crashing! 2M
PP011/12 DATING GAME (2) Very witty!, Get it. 3.5M!
PP016 GULF WAR Another ES production! Good 2M! Y
PP021/24 LANDING (4) Tobias Richter poweranim 4M!
PP025/27 STATION AT KHARN (3) Incredible 2M demo Y
PP040/43 AT THE MOVIES II (4) Hilarious ! 1mg>3mg
PP044/45 AMY V WALKER II (2) Another witty ES demo 3M
PP046 SWEET REVENGE Coyote vs Roadrunner ! 1.5mg+Y
PP048/9 A DAY AT THE BEACH Stunning ! 2 Mg
PP050 UNSPORTING Wicked aerotoon by Schwartz+ 2M Y
PP051/2 CHARLY CAT Super Shwartzlike cartoon! 2mg.Y
PP053/4 CHARLY CAT AT THE BEACH 2nd fab anim 2mg!Y
PP055/6 APC MISSION Superb walker & tank battle 3mg!
PP057/9 CHARLY CAT CATCHES A CANARY Fab! 3MG.
PP060/3 CHARLY CAT MOUSTERMIND Great! 3.5MG.
PP064 DUNCAN DUNG BEETLE Unusual 2mg animation! Y
PP065/6 CHARLY CAT SNOWJOKE Latest anim 2mg.+ Y
PP067/9 SPEED LIMIT 3mg motorcycle race! + Y (3)

DEMOS

PD005 AMOS 3D DEMO Shows some great effects!+ Y
PD018 CHAOS ROCK Fab light show with fractals!+
PD068 PHENOMENA ENIGMA Absolutely brilliant!+ Y
PD076 PLASMUTEX Good plasma & great music +
PD094 SCOOPEX MENTAL HANGOVER A classic+
PD097 SILENTS GLOBAL TRASH Incredible!!+
PD130/34 ALCATRAZ ODDESSY Awesome!! Ok on 500+!
PD139 TRACKERS POWER & AGONY Unusual vectors! +
PD142 FINAL CONFESSION Music & Plasma effects!+ Y
PD143 CAT Silents & Crionics demo for cat club +
PD159 ANARCHY IN THE KITCHEN Some good FX Fab!+
PD162 ALCHEMY MARCHWITH Very good new demo+
PD164 DESIRE MENACE Good Psycho rave demo + Y
PD165 DARK DEMON Mega new demo .... get it+ Y
PD170 PIECE OF MIND Good 3D vector effects. +
PD171/2 SILENTS EXPOSE(2) Incredible Get it !+ Y
PD175 REFLECT SOUND VISION Super effects & music!
PD176 CHAMELEON DEMO Very nice vector demo!+ Y
PD177/8 TRSI TIME ZONE New, some good effects!+Y

MUSIC DISKS

PM001 100 GREATEST 64 TUNES 100 fab 64 tunes!+
PM010 AMEGA PARTY WINNERS Four WICKED songs+ Y
PM012 AMIGADEUS CLASSICAL Eine Kleiner etc. + Y
PM013 ANARCHY CAPTURED IMAGINATION Nice
PM016 BEATLES SONIX Nice music + Y
PM018 BEATMASTER I LOVE TECHNOLOGY Rave
PM019 BRUNO's MUSIC BOX II Superb jazz funk
PM020/21 BRUNOS MUSIC BOX III Jazzfunk. Get it
PM022/23 CLASSICAL MUSIC Bach, Handel etc +Y
PM027 D-MOB MUSIC 3 House music remix, good!
PM030/34 DIGITAL CONCERTs 2-6 Excellent house
PM035 DIGITAL DEBUSSY Fab Rob Baxter conver
PM036 DIGITAL DEBUSSYII classic Debussy music
PM058 MAG FIELDS CHIP FESTIVAL Full of chip mu
PM059 MANIACS OF NOISE This is brilliant!+
PM082a/82b VIVALDI - FOUR SEASONS (2) V.Good
PM090/91MOZART HORN CONCERTO 4 by H.Gam
PM092 PIANO TUNES Nine piano songs- good + Y
PM096 STAIRWAY TO HEAVEN Rendition of the song
PM105/6 KEFRENS MEGAMIX Fabulous dance mu
PM114 UPROAR SPLIT BEAVER MIX rave megami
PM115a/b CHROME Brilliant music disks ! Y
PM121 NIGHTBREED MUSIC DEMO8 Rave music
PM122/4 PLAYSID 2 (3) You must get this !!!!! +Y
PM125 PLAYSID inc.RobHubbard, ManiacsOfNoise
PM134/5 SOUNDS OF SCIENCE (2) Brilliant!+ Y
PM137 KEFRENS MEGAMIX II Very good !! dance mu
PM141 HARDLINE MUSIC 7 groovy synth-style track
PM150 DESKTOP HARPSICHORD RECITAL Classi
PM152 PARADISE: NO BRAIN NO PAIN Good for ra
PM153 BIZE: KILL DA BABE 6 tracks of rave music!! +
PM154 PULSE Yes, pulsating rave music again!! + Y
PM155 VINE G-RAVE 5 more good rave tracks!!! +Y
PM157/8 HEATBEAT UPDATE 9 great songs here!+ Y
PM159 DECIBEL OVERLOAD 5 different tunes!+ Y
PM160 FUSION MATRIX 5 rave type tracks!+ Y
PM161 CYBERNETIX 19 songs packed on 1 disk!+
PM162 MORE MED TUNES Fab tunes by Alex Sta
PM163 OCTASTUFF Some good 8 track tunes! + Y
PM164 OCTAROCK 3D More 8 track & 3d graphics!+Y
PM165/6 NUTCRACKER SUITE Super rendition!+ Y

SLIDESHOWS

PS002 ADVANCE HAM Really stunning !+ Y
PS008 AIRCRAFT SLIDE Pics of fighter aircraft!+Y
PS009 ASTRONOMY SLIDE very impressive !+Y
PS013 BORN TO BE FREE wild animals +Y
PS033 GERMAN RAY TRACE Superb See these !+
PS045 KELLY S/S Some quality HAM pictures.+Y
PS056 NEWTEK DYNAMIC HAM 640x512 4096 colour
PS062 NW DYNAMIC HAM Nik Williams Superb quality
PS067 RICK PARK'S ART Dpaint hires pics! + Y
PS072 SUPER HAM CARS This is a must-Mega!+ Y
PS086 SONIC 5 Superb D-HAM 4096 colour pics+
PS090 FRACTALGEN Incredible fractals etc + Y
PS091/2 FRACTAL MOUNTAINS Excellent stuff!+ Y
PS093 VANISH 3D Awesome 3d ray traced +Y
PS094 INVISIBLE WORLD II Yuk Bedbugs And more
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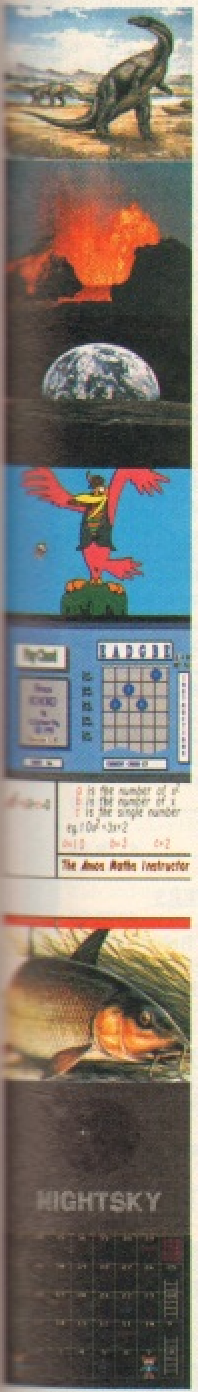
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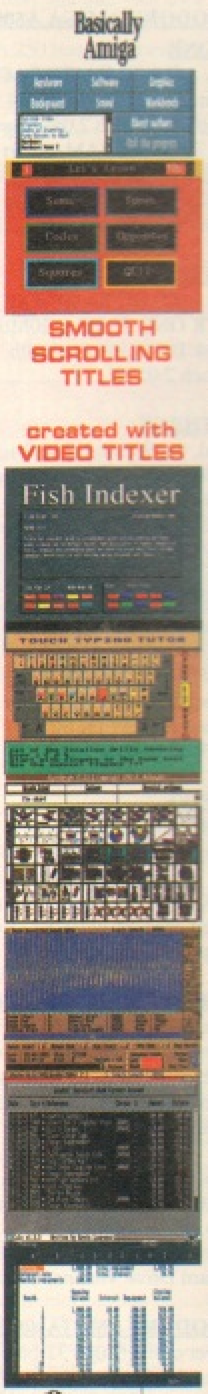
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CLU02 FISH INDEXER If you have ever wanted a program, but have never been able to find it ANYWHERE chances are it's probably in the fish library, but rather than having to rake through thousands of lines of text, why not use the Fish indexer, a superb database of the entire Fred Fish library, with full search, print and more.Price £3.50+

CLU03 TYPING TUTOR A program here now for all you budding office clerks, learning to type can be a real pain, lessons cost a fortune, but not when you have an amiga ! This program will take you step by step through a full typing course, showing where to place your fingers and lots more. Before long you'll be able to type as fast as I can ! Price £3.50 +

CLU04 ALPHA GRAPH This is an extemely useful program for the production of pie charts, bar charts, Block scatter etc, very useful in conjunction with spreadsheets & other business programs, this program comes on one disk and is priced at 3.50!+

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CLU13 DATOS A powerful easy to use database with many features: audible tone, keyboard/mouse control, template feature, cut & paste with mouse, help features, rearrange/add fields even after creation, warning messages, can print down or across the page to save paper, many more features too numerous to list. Price 3.50 +

CLG05 TRUCKIN ON This is a new version of a PD game that was originally bugged to hell, the programmer has taken all the main elements of the game and re-programmed it in C, so its now fully playable truck driving simulation and management program. TO is a must for all you truckers out there and is supplied on 2 disks & needs 2 drives! 4.50.

CLG08 DRAGON TILES This is an excellent puzzle game you have a huge stack of different icons which, using the mouse you must match up to make a level disappear, sounds boring but its actually very addictive, I was playing it for hours ! A Vast improvement on the PD version, Dragon tiles is well worth anyones couple of quid ! Price £3.50 +

CLG09 MOTOR DUEL Now this is just fabulous ! Martin would not leave this game alone for days, its a 3D car racing-chasing-shooting game, with guided missles and lasers, its by the same programmer as the PD game Battlecars, but its a lot better, play the computer (Mega difficult) or link up to anoth amiga for 1 on 1 action ! Price £3.50 +

CLG011 ALL GUNS BLAZING This is a two player car racing game viewed from overhead. You can also blast the other player's car with missiles, lay mines, oil slicks and smoke. There is also a facility to design your own tracks to your own satisfaction. Price 3.50! +

CLG012 BULLDOZER BOB The object of the game is to clear the screen of coloured blocks by pushing them together. Once they touch they disappear! You have a limited number of moves to clear the screen, and the difficulty increases with each level. This is definitaly a game for puzzle fans! Price 3.50! +

CLG013 PARADOX Yes- another good puzzle game, similar to Bulldozer Bob, but Mr Cool head is doing all the pushing! Push the coloured balls till they touch & disappear! There is a time limit for each screen & a variety of objects to collect but beware of traps! Very addictive game. 100 levels of gameplay! Price 3.50! +

CLG015 SPLODGE THE ESCAPE Great platform game. Splodge was going on holiday to Ganymede when the spacebus on which he was travelling was hi-jacked by Big hairy monsters! He was imprisoned in an old house behind a Rongart spaceport building! You must guide Splodge, solving puzzles & collecting coins to buy a ticket home to Jupiter. Price 3.50 +

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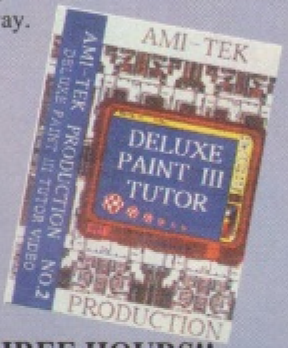
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CDTV

Now you can give your CDTV a power boost thanks to Commodore's newly released CDTV hard drive. Mat Broomfield spins the wheels.

THE ONES THAT GOT AWAY

As hard drives become more and more common on the Amiga, it becomes increasingly less acceptable for programs not to install on them. Traditionally, single disk arcade games won't install, and most publishers claim that this is done as an anti-piracy measure. However, there are some utterly unforgivable exceptions to this rule, as well as a number of single disk games that I feel should be installable. Here's my top of the flops list:

Dungeon Master – The original RPG on the Amiga. Mirrorsoft can be forgiven as hard drives were not nearly so common when it was released. Sentence: Case dismissed.
Pinball Fantasies – The incredible four disk follow up to *Pinball Dreams*. No excuse. Sentence: Detention – Write five million times 'I will not release superb multi-disk games (even arcades) that don't install on hard drive.'
Kick Off 1 or 2 – Only a single disk, but played so often that it would have been nice. Sentence: Rapped knuckles... provisionally suspended.
Heimdall – Intriguing five disk RPG which not only doesn't install on hard drive, but requires almost constant disk changing. Excessive paranoia by Core. Guilty as charged. Sentence: 50 years hard labour in a disk swapping camp on Maxtor 1.
Ishar – Potentially interesting RPG. Should know better. Guilty. Sentence: 10 Years community service at Great Ormond Street children's hospital – Centre for Repetitive Strain injuries.
Alien Breed/Project X – Two more great multi-disk arcades which remain stead-fastly floppy. Awaiting new evidence. Sentence: 100 years in the ISO-cubes.
Utopia – Enjoyable *Sim City*-style game from Gremlin. Excuse that it doesn't install as an anti-piracy measure is not accepted by this court. Awaiting sentence pending psychiatric reports.

BELOW POTENTIAL

Although it represents a great innovation in computer technology, Commodore's CDTV has so far failed to achieve anything like its full potential. The reasons for this are numerous, ranging from poor marketing strategy in the early days and delayed release schedules leading to public apathy. One important reason is almost certainly its lack of expandability. Many users are reluctant to invest in a system which cannot even be expanded as far as a standard A500, especially considering its relatively high cost.

More than two years after its initial release, CDTV gets a hard drive, a peripheral which finally demonstrates that the system is more than just an expensive toy.

The drive in question is a 65Mb unit containing a Maxtor mechanism. There are both internal and external versions available, although this review only refers to the external model.

ALL FITTED UP

Now, the first question that clued-up readers will be asking is how do you connect it when the CDTV contains neither SCSI or IDE interfaces, nor an expansion bus like the A500 has? Well, the answer is easy; the CDTV HD is supplied complete with its own SCSI interface, and fitting it is an absolute doddle requiring no more than a cross-head screwdriver and 15 seconds. The SCSI interface comes in the form of a card about the size of a small RAM expansion board. Simply remove the plate from the expansion hole at the back of the CDTV and slide the card into the hole using the guide rails. The exposed face of the card has a SCSI slot on it which looks exactly like the parallel printer port. When the card is pushed fully home, the front plate sits flush against the CDTV, with the port slightly protruding.

Now all that remains is to connect the hard drive. The unit is supplied with a connecting cable, and this merely has to be plugged into both CDTV and hard drive. The drive also includes its own internal power supply and a cooling fan, so you can say goodbye to yet another electrical socket in your house!

The drive comes pre-prepped and formatted with Workbench 1.3 already installed on it, so once plugged in and powered up, everything's ready to go. Unlike hard drives on non-CDTV Amigas, the CDTV HD has the lowest boot priority in the system. What this means is that it's always the last thing to be checked when you turn the power on. If there's a CD in the main unit, or a bootable disk in an external floppy drive, they'll be loaded in preference to the hard drive.

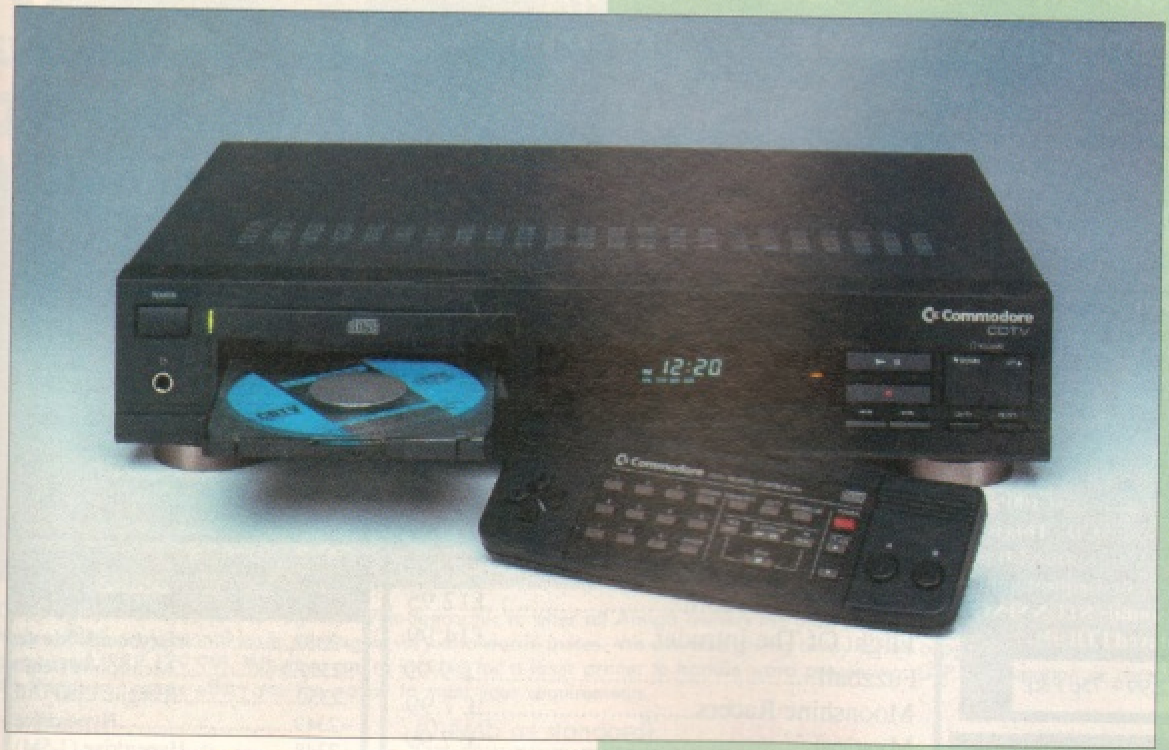
When the drive has finally booted up, you'll be greeted by the familiar sight of Workbench 1.3, and what you do after that is entirely up to you.

WHAT NOW?

You can use the drive as a high capacity temporary store for things that you're taking off CDs for use on other Amigas. Or you can fill it up with utility programs and games either taken from CD or bought on floppy disk. The hard drive is many times faster than the CDTV in terms of access times, so this latter use is particularly worth considering.

Whatever you use your drive for, it will clearly highlight one inadequacy of the basic CDTV system: namely you've got to have a keyboard and floppy drive with it if you're going to use it in anything more than the most superficial manner.

A very good example is provided by Encore, the installation software provided with the drive. The actual program is supplied on a three and a half inch disk, and although it can be operated entirely by mouse, there are three readme files on the disk, which can only be fully read if you have a keyboard!



HD

CONCLUSION

The CDTV hard drive was both easy to fit and reliable to use. But it seems quite pointless to buy one of these unless you own a keyboard as well, because most of the stuff that you're likely to install on it will require text entry. It's a pity that Commodore couldn't have found some way to give you space to fit extra CDTV memory on the drive, especially as so many serious programs require more than 2Mbs. That quibble aside, it is an essental buy.

CDTV HARD DRIVE

. . . at a glance

Gives the CDTV some much needed power. • 65Mb external hard drive for CDTV • Nice speedy Maxtor mechanism • Comes with its own SCSI interface • Requires a keyboard and floppy drive to be used properly • Extremely stylish casing • Easy to fit and use

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TWENTY INSTALLABLE GAMES AND UTILITIES

Just because you have a hard drive doesn't mean that you can always copy your favourite games and utilities onto it. Some programs use protection which prevents them even being read as normal DOS disks, much less being copied to hard drives.

However, the better and more thoughtfully produced programs will not only install on hard drive, but even include installation programs to do the job for you. Here's a list of my Top 10 games and Top 10 utilities.

GAMES

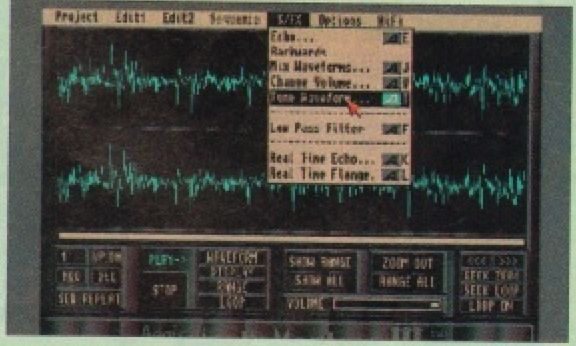
Populous 2 – An epic 'God Sim' from Electronic Arts.
Battle Isle – Classic futuristic war strategy game from Ubisoft.
Monkey Island 2 – Very funny and very big arcade adventure from Lucasfilm.
Might and Magic 2 – The essential D&D role playing game (RPG).
Black Crypt – Very attractive Dungeon Master-style RPG.
Civilisation – The ultimate in population management games.
Microprose Golf – As good as an Amiga golf game can get!
Formula 1 Grand Prix – A racing game for people who actual want to smell the axle grease and feel the crashes...
Eye of the Beholder 2 – Another first rate Dungeon Master-style game.
Railroad Tycoon – Build and manage your own railway network.

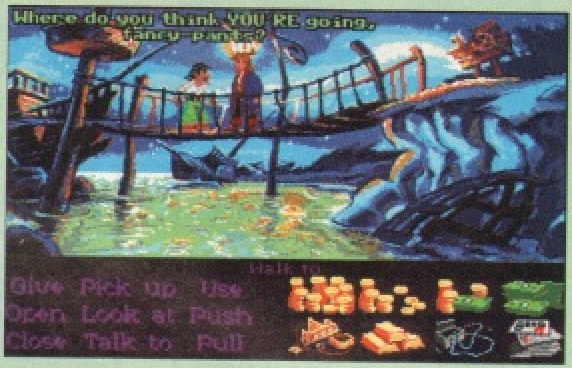
UTILITIES

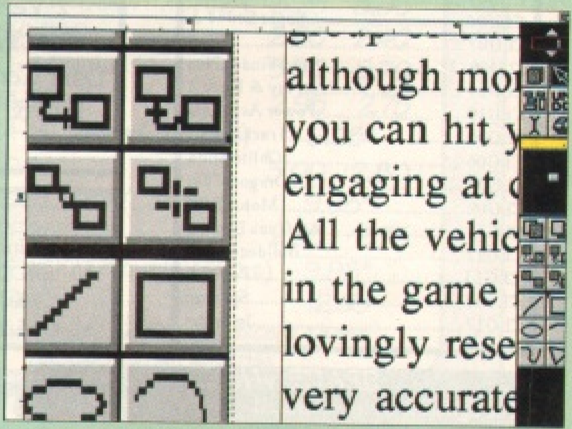
Opus Directory/SID2 – A couple of first rate directory utilities. Absolutely essential.
LHA – One of the more powerful and standard archivers.
Professional Page – A desk top publishing dream.
Professional Draw – Graphic program for above.
Deluxe Paint 4.1 – The only art package that counts.
OctaMED Pro 3.0 – Superb music package.
Audiomaster 4 – Superlative sample editor from Aegis.
Wordworth/Word Perfect – A couple of great word processors.
Quarterback – An invaluable hard drive repair program.
Boot X – Very powerful and flexible virus killer.













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"This is good stuff indeed..." Amiga Computing.

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"Firmly recommended" Amiga Computing.

+2111 Space Rescue
"A stormer of a game and no mistake" Amiga Computing.

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"One of the best graphic adventures I have ever seen!" Amiga Format.

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AMIGA PROFILES

COLD CUT

What do you get if you combine a CD, a rave demo, a platform game, animated fish and video tape? After chill-out session with Cold Cut, Tony Horgan still isn't quite sure...



COLD SOUP

'It's going to be like one big soup bowl, with everyone dipping in and taking whatever they want...' declares Matt Black, regarding the future state of video, music, computer software, and art in general.

Far from a grim vision of a plagiaristic cesspit, the statement comes with buckets of enthusiasm. You see, Matt is all for people-power. No, not like Citizen Smith (Matt hardly ever wears his Afghan coat these days). It's the power given by digital technology, allowing anyone to create artistic works, that's got him on his current buzz.

With partner Jonathan More, Matt is half of the pioneering music production duo Cold Cut, the backroom boys behind such smashes as People Hold On, the ground-breaking house single that launched Lisa Stansfield's blossoming career, and the equally massive The Only Way Is Up, that thrust Yazz into the public eye (and ear). These days, Cold Cut are on a rather different tip, as they say.

THE CUTTING EDGE

In the early 80s, they pre-empted MARRS, Bomb the Bass, S-Express and countless others, when they released Say Kids What Time Is It?, the first ever cut-up record. Now they're predicting, and pioneering, another revolution: the convergence of all entertainment software into one. In other words, computer games, videos, music and films will all become one and the same, according to Cold Cut. Instead of renting Terminator II on video, buying the game, and popping down to Our Price to pick up the soundtrack, Cold Cut envisage us being offered all of this, and more, in one complete package. In fact, they've already made their prophecy a reality, by releasing their Global Chaos CD.

As we reported in the December edition's CDTV column, Global Chaos is a combination of a game (Top Banana), and what is in effect, an album, backed up with freaked-out animated graphics. As it stands, the promising concept is let down by the execution, but with some decent sounds, visuals and a worthwhile game, Cold Cut could be onto something here.

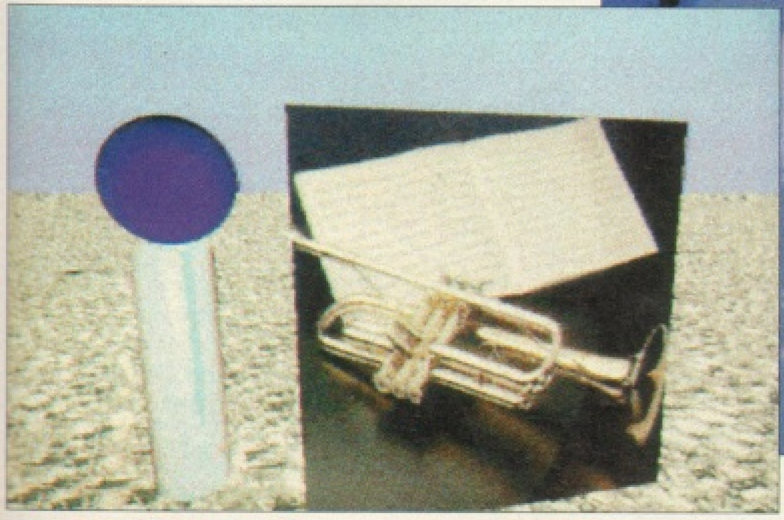
THROBBING CINDY DOLLS

In line with their theory of software convergence, a single was released to coincide with the CDTV Global Chaos, with a promo video shot by Matt for just £200! If you didn't catch it on MTV or any of its other screenings, it's a psychedelic stream of abstract pulsating colour, fractal zooms, ray-traced animations, fish, stop-frame animated Cindy dolls, real-world footage from Matt's camcorder, and guest appearances from KT, the cutie character from Top Banana. Hardly run of the mill stuff.

Apart from the camcorder footage, all of this was done with a combination of an Apple Mac, an Archimedes and, of course, an Amiga. The Archie handled the more processor-intensive routines,



Matt Black – a self-portrait, as digitised by VIDI Amiga. Freakout overlays courtesy of *DPaint*.



Here's some of Matt Black's more sensible 3D grahics work, but if it's wacked-out acid-head psychadelics you want, just wait until you get a load of their E-TV rave video.

like the realtime fractal zoom, the Amiga carried the bulk of the workload, including the ray-traced and digitised animations, while the Mac tied up the loose ends.

Matt can't help but enthuse when the subject turns to ray-tracing and 3D computer animations. Inspired by a sprawling collection of videos from Europe and the States, his own work for a forthcoming video release is coming along nicely. Using *Sculpt Animate 4D* as the nerve-centre, he's recently expanded the system to include *Turbo Silver* and *Imagine 2.0*, with interesting results, despite Matt's opinion that the author of the Imagine manual 'should be put to sleep'.

Taking full advantage of the emerging wave of 3D clip-art, we find him rendering an off-the-shelf robot head on his Amiga. If you look closely, you can just make out the slightest progress every few minutes, perhaps half a line or so at the most. It's taken hours to get halfway down the screen, but Matt thinks nothing of aborting it at this stage in the game, to free up the machine for some of his own doodles.

'I've mapped out the Funky Drummer breakbeat and turned it into a 3D animation!' he says. Imagining some kind of fractal animation, generated from the Funky Drummer sample data, I'm pleasantly surprised to see a shiny ray-traced drummer sitting at his drum kit, knocking out the Funky Drummer break, beat for beat! All that's missing is the sound sample – how convenient that I happen to have my breakbeat sample library with me...

The next release from the Cold Cut/Hex collaboration is to be a rave video, pencilled in for a March '93 release, under the working title 'E-TV'. For this, Matt's hoping to get the trio of Amiga, Mac and Archimedes all hooked up and running as one pulsating psychedelia machine. What a head!



Virtual Sax - one part of the funk quartet that exists in Matt Black's shiny chequerboard virtual world.

GRAPHICS WANTED!

Hex and Cold Cut have got some pretty tasty graphics lined up for their E-TV rave video, and they're looking for more. They're interested in all kinds of computer animation, but especially anything that's been 3D ray-traced, and would welcome anything CU readers have to offer. Send your work, on either VHS tape or floppy disk, to: Cold Cut, Livingston Studios, Brook Road, Wood Green, London, W22 6TR. This time next year we'll be millionaires, and all that.

MATT FURNISS UP CLOSE

It's a tough job, but somebody's got to do it – writing music for games is a demanding occupation. Tony Horgan quizzes one of the Amiga scene's most prolific musicians, Matt Furniss.



HOW LONG HAVE YOU BEEN IN THE BUSINESS?
Three and a half years.

WHAT WAS YOUR FIRST GAME SOUNDTRACK?
The tracks for *Chase HQ* for Ocean, *Manchester United* for Krisalis, and *Laser Squad* for Blade were all written at about the same time.

WHAT SOFTWARE AND HARDWARE DO YOU USE?
Hardware: Audio Imager (sampler), A500 with $^1/_2$ Mb chip RAM and 2 $^1/_2$ Mbs fast RAM, GVP 80Mb hard drive.
Software: *Audio Engineer Plus, ProTracker 1.1a.*

DO YOU COMPOSE DIRECTLY ON THE AMIGA?
Yes. I find it's quicker and easier to do it that way. We've got some keyboards and synths here (at Krisalis), but I just work with my Amiga, sampler and hard drive.

WHAT ARE YOU CURRENTLY WORKING ON?
Soccer Kid for Krisalis. It's going to have 20 in-game tunes, 50 sound effects and a big 250k title track. I've also been doing a lot of Megadrive music – just about anything you'll hear on the Megadrive has come from here. We should be doing some for the Super Nintendo soon.

WHERE DO YOU GET YOUR SOUNDS FROM?
I mostly sample from normal audio CDs. You can listen out for basslines or melodies you like, and if you're lucky, you'll get just that part played on its own. Then you can lift the instrument sound, and use it to play any tune you want. That new Shamen CD has got some good stuff on it – some good basslines. Those sample CDs are too expensive at £50 a throw.

WHICH OTHER AMIGA MUSICIANS DO YOU RATE?
Tim Follin and Richard Joseph are two of the best. Some of Tim's stuff is excellent, but you don't hear much of it these days. It's a shame, the games he does the music for usually aren't up to much. I really like the music he did for Ocean's *Fly Spy* – lots of lovely wah-wah guitar.

HOW DO YOU FIND THE AMIGA FOR MUSIC?
Generally, it's pretty good. The sample quality you can get is really good. I'd definitely advise anyone to get decent sampling hardware, like Audio Imager, rather than go for the cheap £40



Amiga music vet Matt Furniss tickles the ivories as he gets creative for yet another smash track.

jobs. Audio Imager can grab really low sub-sonic bass, and at the other end it's got excellent treble response.

What I don't like is the restriction of four channels. Also the sound chip should be able to access Fast RAM. When you're doing music for a game, the programmers often want to use the blitter to display the sprites, so you've got the blitter and the sound chip both after the same bit of Chip memory, and you usually end up with about 50k for the soundtrack. Commodore should have sorted it out with the 1200.

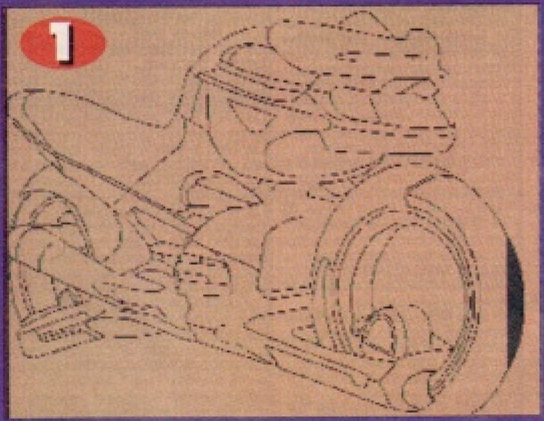
WHAT DO YOU RATE AS YOUR BEST SOUNDTRACK?
I think *Manchester United Europe* was quite good, and I'm pleased with the music I've done for *Cytron*, the new one from Psygnosis.

DO ANY OF YOUR OLD TUNES MAKE YOU CRINGE?
Yes, loads of them! You think 'Oh God! That sounded alright at the time'. If there's one in particular, it's probably the music in *James Bond* from Domark – it was this really cheesy tune, with some samples that were pretty good at the time, and most people liked it when it came out!

ART GALLERY

The good, the bad, and the ugly – we see them all here at CU (after all we work with them)! Only the first group, however, find their way into the frames of the Art Gallery. This month's exhibits await your eager eyes...

MEAN MACHINE Showing that it isn't necessary to be state of the art to produce good art is this 16 colour picture drawn on *Deluxe Paint III* by Hugh Whiteley of Whitby, North Yorkshire.



1. At the start of the drawing (in High Resolution), note how the outline of the motorcycle is sketched in with short and dotted lines, rather than long solid ones.



2. The addition of blocks of bold basic colours to the bike begins the process of 'filling it in', making it seem more substantial.



3. Hugh refined the colours at this stage, changing the palette and removing the black outlines.



4. Finer shading is added to the bike, as is greater mechanical detail – wires and such like.



5. The next stage take sthe bike almost to completion as the detail is elaborated further, this time on the wheels and tyres – note the realistic tread and the more elaborate wheels.



6. The glint of light on the spotless paintwork, and further shading, complete the bike. Now, after six hours of work, it's ready to get its motor running, and head out on the highway for a vroom with a view.



'Don't laugh at me, 'cause I'm a fool...' This clown looks a bit down; the melancholy man in motley was drawn by Dave Franklin (Yes, the Dave Franklin who drew the warrior also featured this month!), again using Deluxe Paint. The picture is in 32 colour Low Resolution.

WRITE IN

If you have a picture you consider worthy for inclusion in the Art Gallery, please bear in mind the following guidelines when sending material in:

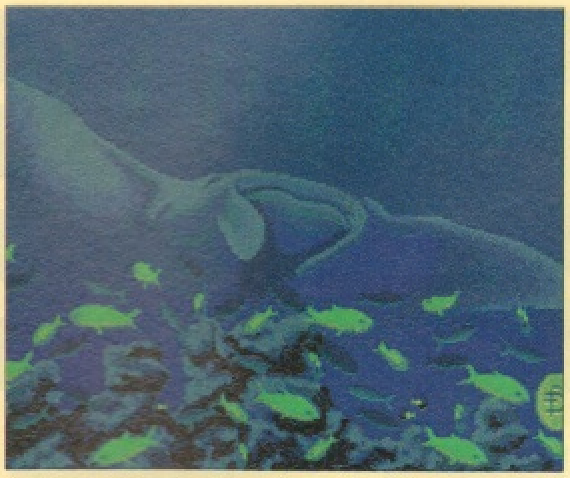
- Use an IFF disk showing your drawing at several stages of construction, as well as in its completed glory.
- Include a description of how you produced the effects displayed in each shot – your advice could help and inspire others. Please ensure that the description is written on a sheet of paper, even if it has been included as a file on the disk – it makes reference much easier when viewing your pictures.
- If your drawing is based upon the work of another artist or photographer, please include details of their name, the title of the original picture, and where you saw the copy you were working from (a book title, for example).
- Disks bearing drawings featured in the gallery will be retained by CU (We're hoping to rival the Tate one day!). If you would like your disk returned, in the event of its pictures not being chosen to appear on our pages, please include a stamped addressed envelope (taking into account both the weight and fragility of computer disks).

A game will be awarded to all Amiga artists whose work is featured.

Send your disk to: CU Gallery, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.



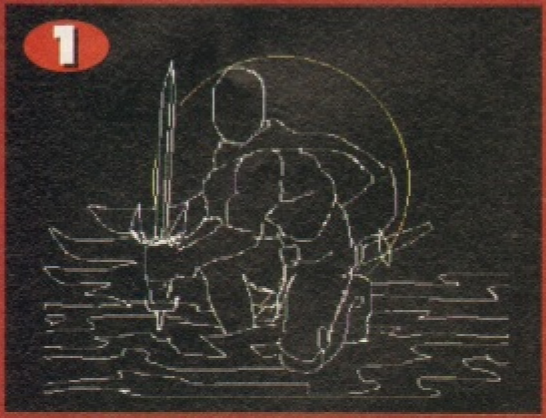
Making the skin of many readers crawl is this realistic picture of a jumping spider. It was drawn with *Deluxe Paint III* (Lo-Res, 32 colours) by Silvia Hoefnagels, a professional animator from Castleknock, Ireland.



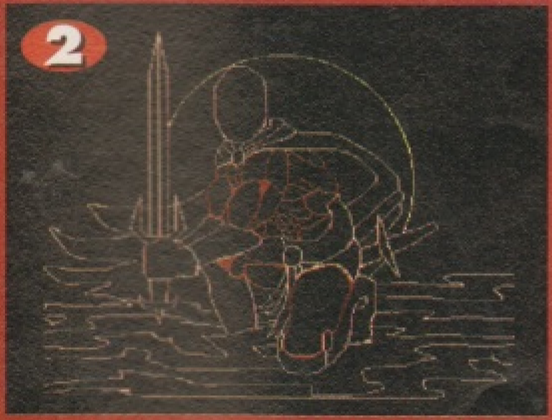
Another realistic animal pic, yet one with quite an unusual look to it. This was also drawn by Dave Franklin, proving he is not limited to fantasy subjects. The painting was produced in 32 colour Lo-Res with *Deluxe Paint*.

FANTASY FIGURE

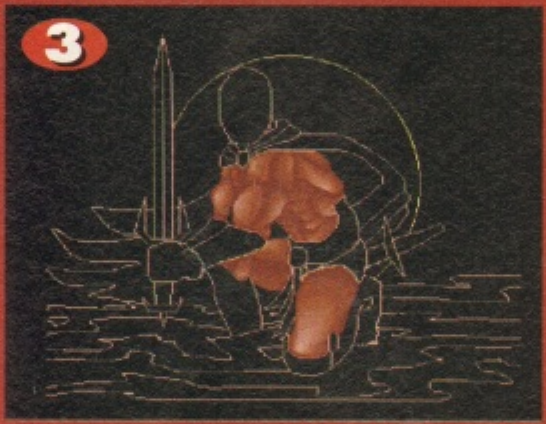
Showing how a classic fantasy figure can be produced is this clearly explained sequence of pictures from Dave Franklin.



1. Using *Deluxe Paint IV* in 64 colour Lo-Res, Dave begins with a basic white outline for the principal figure. He used the circle tool to draw the moon.



2. The first few colour ranges for the skin tones have now been set, changing the colour of the existing outlines. Each muscle on the legs, arms and torso is drawn.



3. The range for all skin tones is established. Using the Fill option, with a Contour Fill in the range that has just been set, each muscle is filled separately.



4. Remaining detail was added using the magnify mode. The chrome effect on the sword and armour takes practice, but clearly produces a worthwhile result when mastered.



5. Atmospheric fog (or smoke) is added to the foreground, and a starry sky placed overhead. Other details, like the green plume on the helmet are also put on. Dave's monogram, as a brush, is stamped in the bottom righthand corner for the finishing touch.

TERMINATOR

These movies have provided a fruitful source of inspiration for submissions to the Art Gallery. Here's the muscle man himself, as the original incarnation of the rust-proofed killing machine, drawn by Chris Lumb of Leeds.



1. Chris used *Deluxe Paint IV* (Lo-Res, 64 colours) to mix the colours required. A bare outline was then drawn in.



2. The lines of the figure and the gun become more clearly defined in this stage.



3. With the addition of more colour and glinting light, the figure now looks recognisably like...Billy Idol? Notice the detail added to the tough guy glove he's wearing.



4. Final touches are added to the hair, making the man unmistakably Arnie. The black background, crossed by laser beams, gives a more dramatic effect.

PDSCENE

Emerging once again from the ever increasing mountain of PD disks, Tony Horgan digs deep into the pile to find something interesting worth writing about.







XPOSE
demo

Megademos haven't been abundant in recent months, but demo veterans 'The Silents' have served up a tasty little two-disker with Xpose. Some nondescript vectors on a starfield backdrop get things going. From here it picks up with some good plasma-esque warp scrolls. Blurred vectors and sinus waves are up next, followed by a bit of soothing plasma.

Next, it's time for a metamorphing glenz, a spinning polygon with semi-transparent surfaces. Colour-cycled plasma is followed by some pulsating vertical copper bars. Finally there's a rotating globe made up of lots of tiny dots, light-sourced to give a true 3D look. It's all accompanied by an ominous soundtrack, something like Jarre's Rendezvous. Not a gob-smacker, but entertaining all the same.

Available from: PD Soft, 1 Bryant Avenue, Southend-on-Sea, Essex, SS1 2YD. Tel: 0702 466933. Disk no. 2633+2634. Price: £5.50 (including P+P).

78%

TECHNO CONSPIRACY
music demo



There's nothing to rival the brilliant Jesus on Es rave demo this month, but Majic 12's Techno Conspiracy should get your bum wiggling all the same. It's pretty solid hardcore stuff – mostly beats and looped riffs played on stabs and buzzes.

Graphically, it's not exactly eye-popping, but a couple of animated groovers make it more interesting to watch than the CD player screens of most music demos. After a while it starts to sound like The Prodigy, thanks to some rasping synth stabs and manic tunes. Techno Conspiracy is the sort of demo that makes most people wince. On the other hand, if head-banging hardcore is your bag, it'll go down rather well. Strictly for techno-heads only.

Available from: PD Soft, 1 Bryant Avenue, Southend-on-Sea, Essex, SS1 2YD. Tel: 0702 466933. Disk no. 2632. Price: £3.00 (including P+P).

80%



Hard-as-nails breakbeat techno isn't everyone's scene, but if you like nothing better than to stomp the night away to some underground hardcore, get a load of Techno Conspiracy.

LABELS

It's been bugging me for ages, and something has to be said. Why do all you PD companies have labels that are almost impossible to write on? By all means put your logo, address and phone number on the labels, but how are we expected to mark up our PD disks when there's nothing but a 3mm x 6mm box in which to write the name of the program, demo or whatever? Sort it out.

TIME ZONE
demo

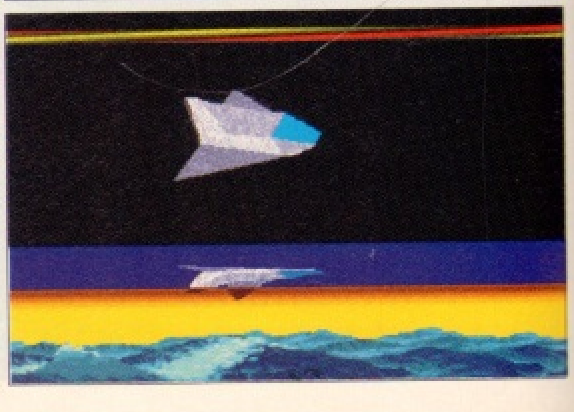
You can usually count on Red Sector to come up with the goods, and their latest two-disk megademo gets going in style. A bunch of solid 3D chunks come spinning onto the screen and shunt together, bending and stretching to form the RSI logo. After that, it's time to endure a painfully slow sequence, which has the programmers' mug shots trundling around the screen for what seems like an eternity. Bear with it, and you'll get to see another nice metallic RSI logo, which peels off its outer crust as it turns red hot. A gaudily-coloured vector spitfire takes a flight around an inky void, before the prompt for disk two comes up.

A new soundtrack revitalises the demo, as a Star Wars-style 3D text scroller displays some tricky-to-read text. After that it starts to look like something made with Red Sector's own Demomaker, with fractal patches and copper bars. Texture-filled vectors are up next, and looking pretty smooth with it. A full-screen digitised animation of a flapping dove wraps it all up. Well worth a screening if you can stomach the low points.

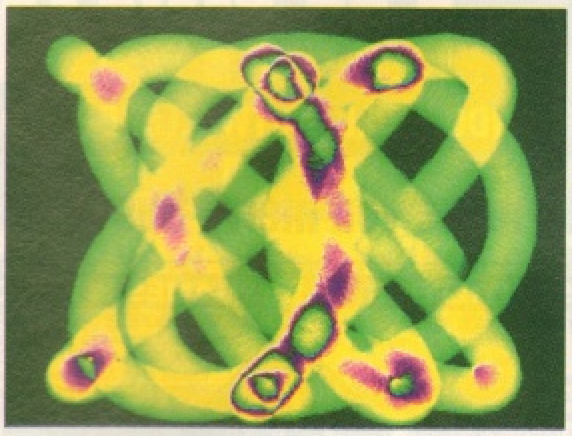
Available from: PD Soft, 1 Bryant Avenue, Southend-on-Sea, Essex, SS1 2YD. Tel: 0702 466933. Disk no. 2623+2624. Price: £3.00 (including P+P).

81%





SOUND VISION
demo





They like their fantasy artwork, these demo coders. This one from Reflect opens with a typical hand drawn picture of a centaur – completely irrelevant to the rest of the disk, but then continuity has never played a big part in demos. After a long winded session that sees letters spinning onto the screen, the words 'Reflect Presents' eventually appear, before morphing, via a kind of blurred plasma, into the title of the demo. In comes the music, and for a change, there's actually a decent lead synth sound in there.

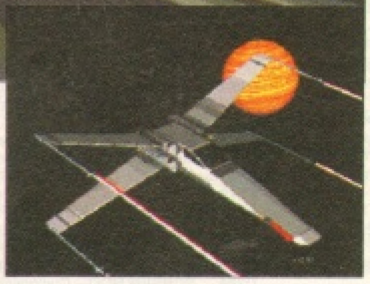
The main demo gets off with one of those rotating cubes, that has a different animated effect on each face, followed by a short bout of colour pattern generating. The highlight of the demo is the bouncing vector globe, which has a vector map of the world wrapped onto a light-sourced ball. From here you get a smooth ray-traced animation of a string of balls, some nice fiery graphic effects, a bunch of cubes rotating within cubes, and a speedy realtime fractal landscape generator. Side-stepping most of the cliches, with plenty to keep you interested, this is one of the best single-disk demos to come out for quite a while.

Available from: PD Soft, 1 Bryant Avenue, Southend-on-Sea, Essex, SS1 2YD. Tel: 0702 466933. Disk no. 2631. Price £3.00 (including P+P).

89%

ONE DAY IN THE SOL-SYSTEM
slideshow





Do you get all excited at the mention of an X-Wing? Does the sight of a lovingly ray-traced mothership get you foaming at the mouth? Okay, no need for a show of hands – you know who you are. Especially for the likes of you, Analog have put together a 10-pic slideshow of spaceships, rockets and docking bays.

There's a half-hearted attempt to tie all the pictures into a storyline, rather than just shovel them onto the screen in any order, but it doesn't really come off. Even so, there are some neat ray-traced HAM graphics on show – not as detailed or polished as the stuff from Tobias Richter, but very nicely done all the same. After the show there's an interactive 'time tunnel' effect, which you can tweak with the function keys. The background music has some nice original samples, and goes well with the space theme.

Available from: PD Soft, 1 Bryant Avenue, Southend-on-Sea, Essex, SS1 2YD. Tel: 0702 466933. Disk no. 2641. Price: £3.00 (including P+P).

70%

REFLEX
demo

Vectors are really in vogue with the demo teams at the moment. Exactly why, is a bit of a mystery. To get that magical 50 frames per second needed for slick-looking demos, the coders are restricting themselves to cubes and paper-dart spaceships. Reflex, from Liquid, opens with some of these unimpressive vectors, as a spaceship emerges from a box, and proceeds to fly around a tumbling starfield. A curious stage follows this, in which the spaceship buzzes a nondescript circular backdrop. Don't ask me what that's all about!

A multi-colour 3D floor-scroll is the next backdrop for the vector ship, rating a 9 out of 10 on the sick-o-meter. A few still pics and contact screens bring it to a close. Impressive in places, but could do better.

Available from: Cynostic, 85 Wyken Croft, Coventry, CV2 3AD. Tel: 0203 613817. Disk no. D0008. Price: £2.00 (including P+P).

68%





This multi-coloured honeycomb might look pleasant enough here, but see it moving and you'll be reaching for the sick bag.

JOYRIDE
demo

Demos that stick to one effect for too long can be very tedious. Phenomena have made sure they don't make that mistake with Joyride, a demo that offers a dash more variety than the rest.

There's a trio of bouncing dot balls to get things started. After that there's some abstract vector graphics, coloured with copperlists. Unfortunately the objects are too complex for the 3D routine, and it jerks about pretty badly. Smoothness is restored for the 3D tunnel effect (just like the one on the computer in the kids' TV program Chocablock), which spews out spinning vector objects into the foreground. The screen is then split into quarters, with a different effect in each: a bob tunnel, a dot flag, a big scrolly message, and a starfield with a teletype over the top. A solid-vector snaky thing made out of stars is next, and a tasteful purple rotating spiral adorns the end screen. It gets off to a shaky start, but finishes off in impressive style.

Available from: Cynostic PD, 85 Wyken Croft, Coventry, CV2 3AD. Disk no. D0485. Tel: 0203 613817. Price: £2.00 (including P+P).

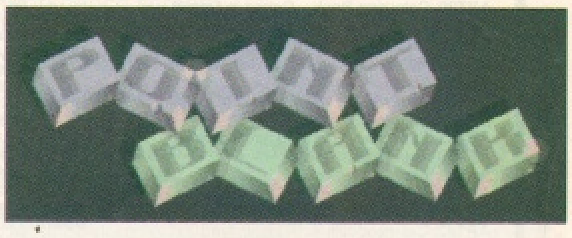
83%





Nice vectors – shame the plotting routine can't handle the detail. If it's smooth you want though, check out the Chockablock/Dr Who tunnel effect.

POINT BLANK
demo



Bit of a shorty, this one. Andromeda are big on cubes, and start the demo with the title etched on a series of ice cubes. This is followed by a session of big light-sourced cubes exploding into lots of little ones. Bendy cubes are next, and then – shock horror – a bubble! Quite a nice bubble it is too, bouncing around the screen with its pretty little stars stuck to its surface. Finally, there's another vector cube, with metamorphing patterns on its surfaces. The music's not bad, apart from the brass sample. A demo for squares.

Available from: Cynostic PD, 85 Wyken Croft, Coventry, CV2 3AD. Tel: 0203 613817. Disk no. D0512. Price: £2.00 (including P+P).

68%

PUBLIC DOMAIN

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Strictly pd – guaranteed to make you merry this Christmas!

All disks are compatible with the A500, those marked with '+' are also compatible with the A500 (+) and A600

NEW GAMES

- **ASI 1** Tanx, Rollerpede, Avatris +
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- **ASI 6** PacMan and four more
- **ASI 7** Moonbase, Trix and Mightworks
- **ASI 8** Airace2, Hball and more +
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- **ASI 10** Escape, Pipeline and Pickout +
- **ASI 11** Dad, Connex, Reversi+ Trippin +
- **ASI 12** Llamatron, Car, Powerpong
- **ASI 13** Twintris + many more games
- **ASI 14** ChinaChallenge2 & Amiga columns +
- **ASI 15** Battlecars Lettrix and Mambamove!
- **ASI 16** Wastelands, Mission X and PacMan +
- **ASI 17** Tomcat, Defenda, Jetman Bugblaster +
- **ASI 18** Henry in Panic Skyflyer Omega race
- **ASI 19** Growth, FranticFreddy and more!
- **ASI 24** Revenge DuxCroak 3d maze +
- **ASI 25** Another mega collection – Buy it! +
- **ASI 26** SuperPacMan 92 Smash TV Ashido +
- **ASI 27** Addictive card games – Very good! +
- **ASI 28** Doody/DrMario/Invaders2/Madbomber2 +
- **ASI 29** DOG/Rome/Nova/B-Bal/Atax/Quadrix +
- **ASI 30** Bounce and Blast, Total Fire etc +
- **ENT +** 1 Klondyke, Hball and more +
- **ENT +** 2 Zerg BounceNbob Frogger +
- **ENT +** 3 SpaceWars, Squamble and more +
- **ENT +** 4 Zon Hanoi Yelp and more +

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■ The clip art in this collection is v.high quality
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- **ART02** Houses – pictures of mansions (2 disks) +
- **ART03** Religious – full of holy clip art (3 disks) +
- **ART04** WW1 Aircraft (1 disks) +
- **ART05** Men 2 disks full of men at work +
- **ART06** Women 2 disks full of women! +
- **ART07** Kids clip art (2 disks) +
- **ART08** Business – office clip art (2 disks) +
- **ART09** Office – more of the same +
- **ART10** Students clip art +
- **ART11** Saletime – useful stuff inc. logos +
- **ART12** Xmas – a bit of Xmas cheer (3 disks) +
- **ART13** Punch – cartoons etc (3 disks) +
- **ART14** Animals – v.high quality pics +
- **ART15** Cats – 12 feline pics +
- **ART16** Silhouettes – 18 pics +
- **ART17** Schools (2 disks) +
- **ART18** Babies +
- **ART19** Sports – (2 disks) +
- **ART20** Olympic – more sporting stuff (2 disks) +
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- **ART26** Banners (2 disks) +
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- **ART28** Butterflies +
- **ART29** Food – culinary clips (2 disks) +
- **ART30** Colouring Book – Colour in Dpaint +
- **ART31** Borders – for use in DTP (2 disks) +
- **ART32** Mac Clip – quality macart (2 disks) +
- **ART33** Hornback – scenic clip art +
- **ART34** Teddy Bears (2 disks) +
- **ART35** Vanity Fair – fashion clips (2 disks) +
- **ART36** Halloween clip art +
- **ART37** Showtime – dancing,singing etc +
- **ART38** Vegetarian clip art +
- **ART39** Floral – 14 pics +
- **ART40** Mythical – stars and zodiacs +
- **ART41** Dog woodcuts +
- **ART42** Cat woodcuts +
- **ART43** African woodcuts – more animals +
- **ART44** American woodcuts +
- **ART45** Arctic woodcuts +
- **ART46** Farm woodcuts +
- **ART47** Mixed animal woodcuts +
- **ART48** Birds woodcuts +
- **ART49** More animals +
- **ART50** Animal lineart +
- **ART51** Botanical line art +
- **ART52** Family Scenes (2 disks) +
- **ART53** Golf humour (2 disks) +
- **ART54** Space and transport +
- **ART55** Softscene2 – rural clip art +
- **ART56** Sports 3 +
- **ART57** Navy – lots of navy type pics +
- **ART58** Travel (2 disks) +
- **ART59** Border and alphabet clips +
- **ART60** Accents and flashes+

We now have FRED FISH 1-750

LATEST UTILITIES

- **U307** The Final Frontier Vol 3 (4 disks), latest edition of this brilliant Star Trek mag +
- **UU027** Filofax – reminds you of important appointments +
- **UU028** Bible (4 disks) The complete King James Bible
- **UU029** Tarot II read your own stars
- **U384** Cyclops v1.0 – art creation package – create plasmas etc +
- **U527** Professional D-Copy v3.0 – as good as most commercial copiers
- **U524** IntroMakers Kit – make own intro screens with IFF pics, digitised samples, and scrolled messages +
- **U528** Multiplayer – claims to be the most powerful, versatile music player for the Amiga +
- **U517** Kefrens Font Editors/Boot Menu Maker
- **U325** Label Maker – make your own labels
- **UU030** Understanding Amos – tutorial +
- **U508** 175 Utilities – the most on one disk
- **U533** Thrallbound – contains spellcheck v1.3 and Examiner v1.0 which help you to learn and tests you on foreign words. Also contains good text adventure game+
- **U534** The main event – calendar & alarm clock+
- **U531** Powerbase v3.2 – powerful and user-friendly database +
- **U535** Wordpower v1.3 – spell checking, crosswords, anagram solving +
- **U514** PC Emulator – runs most pc business software +
- **U385** Plus! (13 disks) – 13 disks crammed with programs info etc. Entirely for A500/A600 users +
- **UU032** TDH Vol 1 – Amos users magazine +
- **U306** Strictly PD essential collection (4 disks) packed with utilities, gaems, music creators and printer utilities +

75p

USEFUL UTILITIES

- **UU001** A-GRAPH – Very easy to use – make bar + line graphs + pie charts. +
- **UU002** CLI TUTORIAL – Learn all about the CLI. Given 70% rating in this magazine. +
- **UU003** MESSYSID V2 – Reads and writes P.C. disks.Given magazine rating of 95%. +
- **UU004** POOLS PREDICTOR – Increase your chances of becoming a millionaire. +
- **UU005** DISK OPTIMISER – Brilliantly simple! Any disk loads up to 15 times faster. Mag rating of 93%. +
- **UU006** A 500 PLUS EMULATOR – Emulate the Amiga Plus on your 1.3 Amiga. (IMG Req).
- **UU007** FREECOPY V1.1 – Removes password protection to allow copying. +
- **UU008** CURSOR V1.0 – Compiler for Amiga Basic programmes. +
- **UU009** BROWSER II – An alternative to SID. Some may find it easier and better. +
- **UU010** PC TASK V1.04 – Powerful multi tasking P.C.emulator, supports CGA graphics, MS DOS floppies and even your hard drive. +
- **UU011** NIB V2.0 – Removes protection and copies. Very powerful. +
- **UU012** GATORS GRAPHIC GALLERY – Examples and step by step tutorials on how to create professional logos like ones found in demos. +
- **UU013** FISH TANK SIM – Simulates an aquarium. +
- **UU014** ANALTICALE SPREAD (2 DISKS) – This is the best spreadsheet program to date on the Amiga. +
- **UU015** AMIGA PUNT PROGRAM – Predict which horse will win from past form. +
- **UU016** JR COMM V1.02 – Latest version of this useful modem program. +
- **UU017** BEATRIX POTTER CLIP-ART – An excellent collection of clip art for any DTP program or D-Paint. +
- **UU018** PLOTTING AND GRAPHICS (2 DISKS) – Contains a full featured plotting prog. and a computer aided drafting prog. +
- **UU019** DB – A database with up to 50 fields, max of about 1.2 million records. +
- **UU020** HOME MANAGER – A great all in one address book with an inventory database + to do list. +
- **UU021** ASTRO PRO ASTROLOGY – The best astrology program on the Amiga by far. +
- **UU022** MULTI DOS V1.12 – After installation your Amiga drives can read 1MB disks. +
- **U0024** TEXT PLUS V4.0(E) – Latest update of this excellent word processor program. Now compatible with TeX the professional type-setting prog. Found in the Fish Collection. +
- **U0025** AMOS LESSON I – Find out how to get the most out of AMOS. Had good review. +
- **U0026** EDWORD 2.2 – Best text editor around. +
- **U0027** MEGACOLOUR V1.0 – A program which transforms a b/w screen into full colour +

We now have T–BAG 1–61

GAMES & EDUCATION

- **N001** TOTAL CONCEPTS (2 DISKS) – Story books about astronomy and dinosaurs. +
- **N002** AMERICAN FOOTBALL COACH – Play therole of an American Football coach +
- **N003** BATTLEMENTS – Similar to Hunchback on the Spectrum and C64. +
- **N004** OTHELLO – The best P.D. version of this classic board game.+
- **N005** CRAZY SUE – The best PD platform
- **N006** SUPERLEAGUE MANAGER – Football management game.+
- **N007** METRO – Mini sim city. +
- **N008** SMASH TV THE RIP OFF – Great stuff.+
- **N009** HENRY IN PANIC – Jet set Willy clone. +
- **N010** MISTER + MISSIS – Amusing and cute platform/arcade adventure +
- **N011** DUNGEONS OF AVALON – Compares to likes of Dungeon Master. Stunning graphics and atmospheric sound effects. +
- **N012** CALORIEBASE – Received 89% in CU Amiga. Keep a daily database of your calorie intake. Usefulfor dieters +
- **N013** BACK TALK – Discusses common lower back problems, the causes and treatments given. Uses detailed pics/anims +
- **N014** TRAINING LOG – for fitness training +
- **N015** SPANISH,FRENCH,GERMAN,SPANISH TUTORS –4 great tutors +
- **N016** A VISIT TO THE RED PLANET – Guided tour of Mars, fascinating +
- **G396** FORMULA ONE CHALLENGE – 4 people can play in this excellent strategy match +
- **G397** TANK ATTACK – Attempt to storm HQ avoiding enemy tanks – good shoot em up +
- **G398** TOP SECRET – great text adventur e with cute graphics, given 100% in mag review +
- **G399** TOMCAT– fly your F15 against enemy planes, ships and gun towers +
- **G400** FIGHTER PILOT – superb WW1 game +
- **G380** CARD,BOARD & ARCADE GAME – 13 great games on one disk +
- **G381** PD PUZZLES – inc. puzzle + puzzle maker

DEMOS & MUSIC

- **D480** FRACTALE – excellent history of fractals
- **D483** ALACATRAZ ODYSSEY (4 disks) – probably the year's best demo
- **D487** WWF Pics – the clearest hi-res pics I've seen
- **D499** RAUNCHY SLIDES – pics of pretty girls
- **D507** SCHWARZTOONS (3 disks) – packed! with superb cartoon demos by Eric Schwarz
- **D130** SAM FOX SLIDESHOW
- **D129** MARIA WHITTAKER SLIDESHOW
- **D470** KATHY LLOYD SLIDESHOW
- **D316** MARIA WHITTAKER ANIMATION
- **D170** GIRLS OF SPORTS ILLUSTRATED
- **D500** DIGITAL DAMSELS
- **M374** HARDCORE III –pumping rave music and graphics
- **M376** TECHNOMANIA 91 – wire this into you hi-fi excellent
- **M378** NEW WAVE – slip on your slip ons and boogie down
- **M405** EXPRESSIONS 3 – 3 tracks with 27 minutes worth of brilliant house/rave music
- **M365** ALCATRAZ – more than music, highly original music and demos
- **M352** CHART TECHNO 1 – 25 minutes of altern-8 remixes
- **M356** BANGING RAVES – the 2nd coming, 11 bands in this great remix
- **M359** SUPERSYNTHS VOL 1&2 (1MB) – great graphics and music

75p

Blank disks...
12 in own box... £7.50, 50... £22.50
100... £40.00, Mouse mats... £2.99 each

VIDEO PRODUCTION

- **V001** DESK TOP VIDEO PACK – Collection for video producers, including Rolling Credits, Slideshow,Video Backgrounds, Special Effects, Pattern Generator and more!!! +
- **V002** S-MOVIE – Smooth scrolling video titler. +
- **V003** Turbotitler – Add subtitles to your videos. +
- **V004** TV & VIDEO GRAPHICS (8 DISKS) – Packed with background screens for your video productions +
- **V005** VIDEO PRODUCTION (2 DISKS) – Packed with video & Glenlock utilities. +
- **V006** VIDEO SCREENS 1 – Background pictures for video production. +
- **V007** VIDEO & ANIM: VIDEO DB – Keeps track of your video tape collection. RTAP lets you run large Anims on small MEM machines +
- **V008** IMAGE LAB – Like a mini art dept. Tools on tap does fades, colour bars & grey bars. +
- **V009** VIDEO: STILSTORE – Used to create over the shoulder Graphic inserts like the 9 O'Clock news. +
- **V0010** SHADES & FADES ANIMFADER – A utility to fade screens in and out +
- **V0011** ANDROIDS BACK VIDEO GROUNDS – Selection of B/G pictures. +
- **V0012** HARLEQUIN VIDEO ART & FONT DISKS (3 DISKS) – After its reviews in Cu Amiga shot to No.1 in sales chart. Excellent. +

CREATIVE UTILITIES

- **CR001** AMIGAVENTURE & ADVSYS – Make your own text games with these progs.+
- **CR002** PRINT STUDIO – Excellent for printing pictures or text. +
- **CR003** ANIMATION STUDIO – A brilliant Anim creator for you to make your own amimations. +
- **CR004** VERTEX MODELLING – Allows you to create 3D objects without using the X, Y & Z views. Loads sculpt 3D/4D & Turbo Silver. +
- **CR005** MODELLING OBJECTS – Contains over 20 vector objects in image format. Perfect for use with CR004. +
- **CR006** MAGNETIC PAGES V 1.30. – Create your own disk magazine. Received 10/10 in review by Amiga shopper mag. +
- **CR007** STRATA V1.0 – Landscape generator which allows printing of them from any angle any position & any magnification. +
- **CR008** AMOSBROT V1.1 (A) – This update has even more factal types which include Logistic Equation, Coast Lines & Trees – received good reviews. +
- **CR009** GRAPHIC PRODUCTION – Utilities collection inc scenery V1.0, Landscape, Landbuild V3.2, Cloud 9, Genesis demo. +
- **U241** FONTS/LOGOS – For use with D-Paint. +
- **U237** PROFESSIONAL DEMO MAKER – Create your own demo masterpieces. +
- **U299** SLIDESHOW MAKER – Shows how to present slideshows in different ways. +
- **U084** SPEECH TOY – Get your Amiga talking. +
- **U082** VOICES – Add speech to your demos etc.+
- **U312** MANDLEBROTS – The best Mandlebrot generator around. +
- **U315** ULTIMATE ICONS – Includes Icon Lab, Icon Master & Icon Meister – splendid disk.+
- **U321** SUPA FONTS – For use with D-Paint etc. +
- **U079** ELECTROCAD – Impressive package.+
- **U078** MCAD – Great 3D Design Package. +
- **U331** LAND BUILD 3.2 – Generate landscapes and view from any angle. Amazing! +
- **U346** ULTRAPAINT – Fab paint package. (+)
- **U364** SCREEN MOD – Customise the way programs and screens appear. +
- **U366** SHADOW DEMO MAKET – 3 Brilliant demo making utilities. +
- **U500** DEMO CREATOR PACK (6 DISKS) – Get the most out of your Amiga – Get creative. +
- **U491** DKB TRACE – Excellent Ray Trace prog.

STRiCTLY pd

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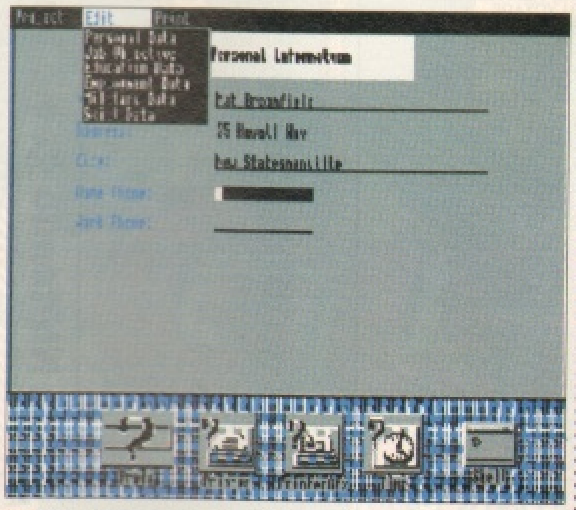
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◆The complete Strictly P.D. library is now available in Australia. To order a catalogue please send a cheque or postal order for $2.00 to Hargware, Dept AC, 29 Woralu St, Woramanga, ACT 2611, Australia.

PD UTILITIES

Mat Broomfield returns from the land of the falling dollar to work his way through another batch of the best PD utilities to be released this month.

RESUME MAKER 3.0
CV DESIGNER



As the economic recession continues to bite, you must use whatever natural advantages you have to make yourself into a more attractive proposition for potential employers. Your resume or CV is likely to be the first thing that a future employer will encounter, and therefore it's crucial that you present your potted history as effectively as possible.

There are a number of different ways that you can prepare a resume according to whether or not you already have lots of relevant experience. If you do, or you have a good work history, a simple summary of your achievements is likely to be the best option, as it gives all the information in an easy to read format.

Resume Maker is a great shareware program that enables you to create and modify such resumes. Basically, it acts like a blank database into which you simply fill in the details. The first page requires you to enter information such as your name and address, etc. but by selecting one of six additional options from the edit menu, you can enter personal data, job objectives, education and employment history, military record (!) and skills. Because each field limits the amount of entry space available to you, it forces you to present the relevant information in a succinct format which will be easier for a personnel manager/ess to read, thus improving your chances of being interviewed.

Once you've created your resume it can either be printed or saved for later editing. Alternatively, you can store it as an ASCII file for editing in your favourite text editor or word processor.

A simple idea which has been well implemented.

Disk No: E003. Available from: Roberta Smith DTP, 190 Falloden Way, London, NW11 6JE. Tel: 081 455 1626. Price: £1.40 (including P&P). Compatibility: Any Amiga. Memory: 512K.

88%

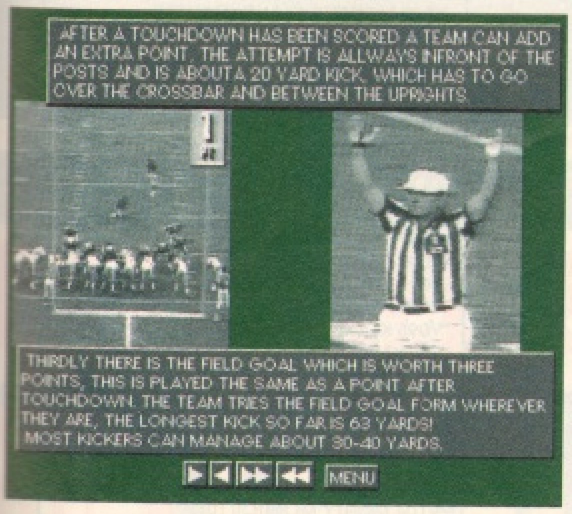
AMERICAN FOOTBALL
MULTIMEDIA PRESENTATION

Although it is widely accepted as the national sport in the United States, many British and European viewers are totally unaware of the subtleties of American football.

The American Football Multimedia Presentation is an interesting and well crafted program which can be used to increase your knowledge and understanding of the game. It is divided into four sections: Rules of the Game, Team Information, Season's Fixtures and Odds and Ends. As a non-enthusiast, I found the Odds and Ends section the most interesting, as it contains dozens of interesting facts about both the game, and some of its most memorable moments. For example, want to know the coldest game that was ever played in the league? It was when Cincinnati played San Diego and the temperature plummeted to a brass monkey low of minus 39 degrees. Time for the thermal jockstraps lads!

The Rules section provides info on the game, ranging from basic playing rules, to attacking and defensive formations and the structure of the NFL. Although these rules are not explained in intricate detail, there's quite enough to give you an understanding of the game. The Team Information section gives a summary on all teams in the NFL, providing such information as their home ground and last season's match stats. Finally, for real followers of the game, the Season's Fixtures gives the fixtures for every week of the season so that you can plan your viewing according to the team you may be following.

Unlike the Total Concepts programs that I've been reviewing over the last couple of months, *American Football* contains very few graphics, and what there is, is very uninspiring stuff consisting primarily of monochrome play diagrams and badly digitised T.V. stills. This is a real shame, because superb as the program may be, I think it would have benefitted by the addition of some hand drawn logos to accompany the team information.



Even though I'm not a fan of American football, I'm very impressed by the sheer quality and effort that has gone into this wonderful three-disk presentation. If you have even a remote interest in the sport get this disk.

Disk Nos: S591-593. Available from: NBS, 1 Chain Lane, Newport, Isle of Wight, PO30 5QA. Tel: 0983 529594. Price: £4.25 (including P&P) for all three disks. Compatibility: A500-A3000. Memory: 512k.

80%

CLUMPY ICONS
WORKBENCH ICONS

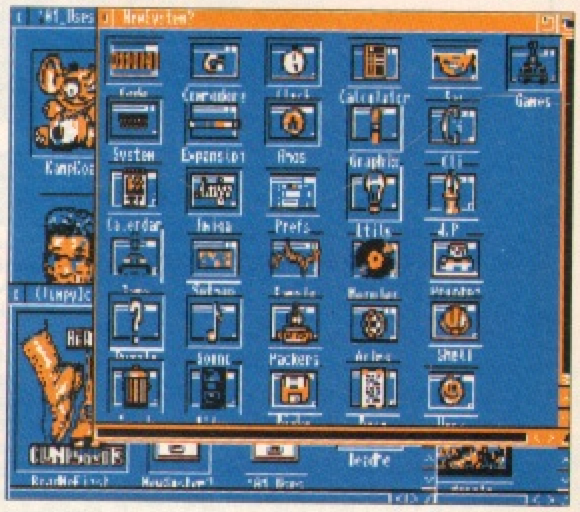
If you write your own programs or you like to compile your own disks, you'll probable have noticed the same old boring icons appearing time and time again. Now your problems are over thanks to *Clumpy Icons*, a new collection comprising well over 100 different icons for every occasion. The icons are grouped under six headings: Specific, Sound and Vision, New System, Disks and Drawers, General and 101 Uses. To be honest, the groupings are pretty vague, because you can find sound icons in the New Systems category and Vision icons in the General drawer.

Nevertheless, generally speaking, Specific contains icons relating to particular programs such as *Real 3D* or *Colourtext*, Sound and Vision contains some really nice generic sound and graphics icons such as walkmans, video cameras and CDs. New System is my favourite, for although it contains icons pertaining to every subject under the sun, they're all overlaid on the old-style CLI icon which means that they all occupy the same area on the Workbench screen, unlike most of the other icons which range from tiny to huge. Disks and Drawers simply holds a selection of 2 and 3D disk and drawer icons, whilst General comprises a nice mish-mash of icons for subjects such as DTP, Printing, Puzzles, etc. The final category is 101 Uses, and this drawer contains by far the most attractive selection of detailed icons ranging from cans of baked beans and miniature Oscars to planets and digitised faces.

Although the icons can be used on 2.0 machines, they were clearly not designed with that colour scheme in mind and to get the best from them you'll probably want to recolour them. Quite the most original collection of icons I've seen. Guaranteed to perk up the most lifeless Workbench screen!

Disk No: 2202. Available from: 17 Bit Software, 1st Floor Offices, 2/8 Market Street, Wakefield, West Yorkshire, WF1 1DH. Tel: 0924 366982. Price: £1.50 (including P&P). Compatibility: Any Amiga. Memory: 512K.

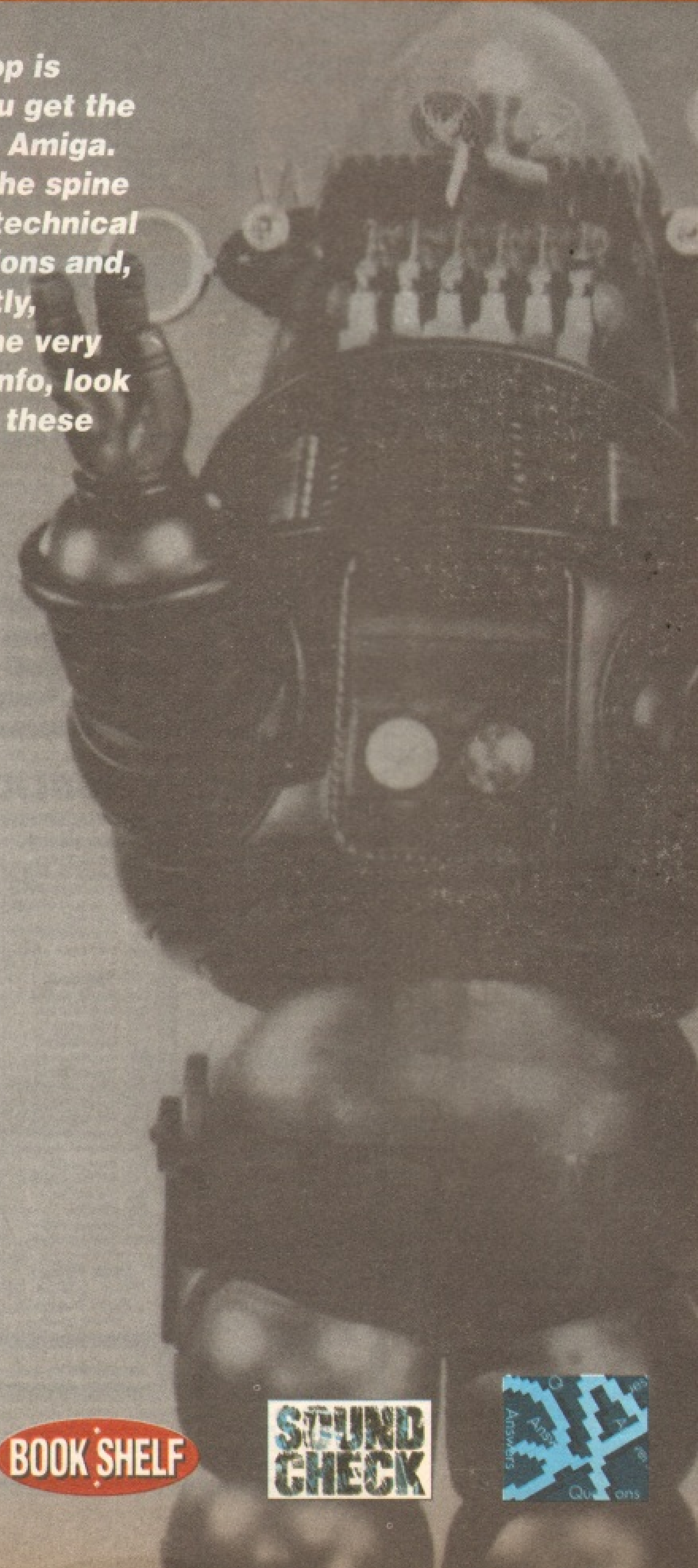
74%



AMIGA Workshop

ISSUE 3 FEBRUARY 1993

Amiga Workshop is here to help you get the most from your Amiga. It's packed to the spine with tutorials, technical reviews, questions and, more importantly, answers. For the very best in Amiga info, look no further than these very pages.



AMIGA WORLD · BOOK SHELF · SOUND CHECK · Answers Questions · CLUB CALL · READER REVIEW

BOOK SHELF

CU Amiga flips a few pages to find out what's new on the book scene. This month we open a very mixed bag.

MASTERING AMIGA ASSEMBLER

BSB: £24.95

Learning to program in a new language can be difficult at the best of times, but 68000 Assembly language is one of the toughest to learn on the Amiga. Not only is the language bafflingly unreadable and time consuming to debug, but the would-be programmer needs to have both a working knowledge of C and a detailed understanding of the Amiga's internal architecture.

To compensate for these difficulties, decently written Assembler programs are usually more compact and will run faster than equivalent programs written in any other language. For programmers who want to squeeze the last ounce of power out of their machines, Assembly language is the ultimate choice.

Mastering Amiga Assembler has been written by Paul Overaa, who has already written two popular titles on Amiga systems and C programming. With this title, he completes a trio which complement each other perfectly.

Unfortunately, he seems to have problems finding a happy medium between unnecessary verbosity and brevity. His introductory chapters, whilst being intelligently written, seem to drag a bit, yet as he moves onto more complex matters, he occasionally seems to assume a high level of understanding from his readership.

Having said that, this is still the most approachable book on the subject that I've yet encountered. Paul has taken a well-considered route to teaching this complicated subject, which hopefully will stop the novice from becoming overwhelmed by extraneous information. Rather than impart every single piece of information on the subject, he restricts himself to discussing only those things which are required to achieve the objectives at hand. Furthermore, he clearly states that his objective is not to re-cover ground which has been thoroughly covered in existing Amiga books.

The tutorials are designed to be used with the Devpac 3 Assembler, although instructions are also given for modifying them to run under A68K, a public domain Assembler, which you can purchase for little more than the price of a blank disk.

As I've already mentioned, at times the book moves at quite a leisurely pace, and you can begin to appreciate this relaxed tempo as the subject matter becomes more complex. The examples are clearly laid out and fairly easy to follow, and although in the early stages they don't even produce a visible result, Paul's style manages to stop you from nodding off.

Subjects such as exec and intuition are covered in the later chapters, and the appendix contains a useful reference to the C programming language as well. Paul seems to take a very common-sense attitude to the language, conceding that there are occasions when it is easier and desirable to programme in C, resorting only to Assembly language for optimised routines and libraries where speed or file size may be an issue.

The beauty of Assembly language is that it is so much cheaper to learn than C, and with this book I suspect that a great many people will finally be able to achieve their dreams and learn to program.

Available from: Bruce Smith Books Limited, Smug Oak Green Business Centre, Lye Lane, Brickett Wood, Herts, AL2 3UG. Tel: 0923 894355.

MASTERING AMIGA AMOS

BSB: £19.95

Few programming languages have caused such excitement or achieved such critical acclaim as Mandarin Software's *AMOS* package. Tracing its roots back to a relatively unrefined Atari ST program called *STOS*, *AMOS* is an optimised extension of the Basic language, with special sections designed for handling graphics and sound in a way suitable for arcade games.

Although programs written in *AMOS* are rarely as fast or compact as their counterparts written in C or Assembly language, the language is so much easier and cheaper to learn that it has become a great favourite with many people, opening up creative avenues that may otherwise have remained shut.

However, despite its advantages, the manual is somewhat intimidating and erratically organised for beginners, thereby creating unnecessary stumbling blocks in the path of those who wish to learn the language. This then is presumably the motivation behind the latest BSB title – Mastering Amiga AMOS (incidentally, *AMOS* is only available on the Amiga so why call it Mastering Amiga AMOS?). Written by Phil South, it reflects his informal and, at times, humorous style with such chapter titles as Pretty Polys, Are You Def? and Proc and Roll!

Like Paul Overaa's book, Mastering Amiga AMOS necessarily includes some lengthy introductory text, but unlike the former title, this text never becomes boring or misguided. From the second I started reading, I was interested to know what Phil had to say, and at no time did I find myself wondering at the meaning of any of his comments. When I reviewed Phil's other BSB book, Mastering Amiga Beginners, I was irritated by his jocular style, but I must admit that it has grown on me, and I can't deny that it certainly makes light reading of a subject which might otherwise be heavy going, especially to the newcomer.

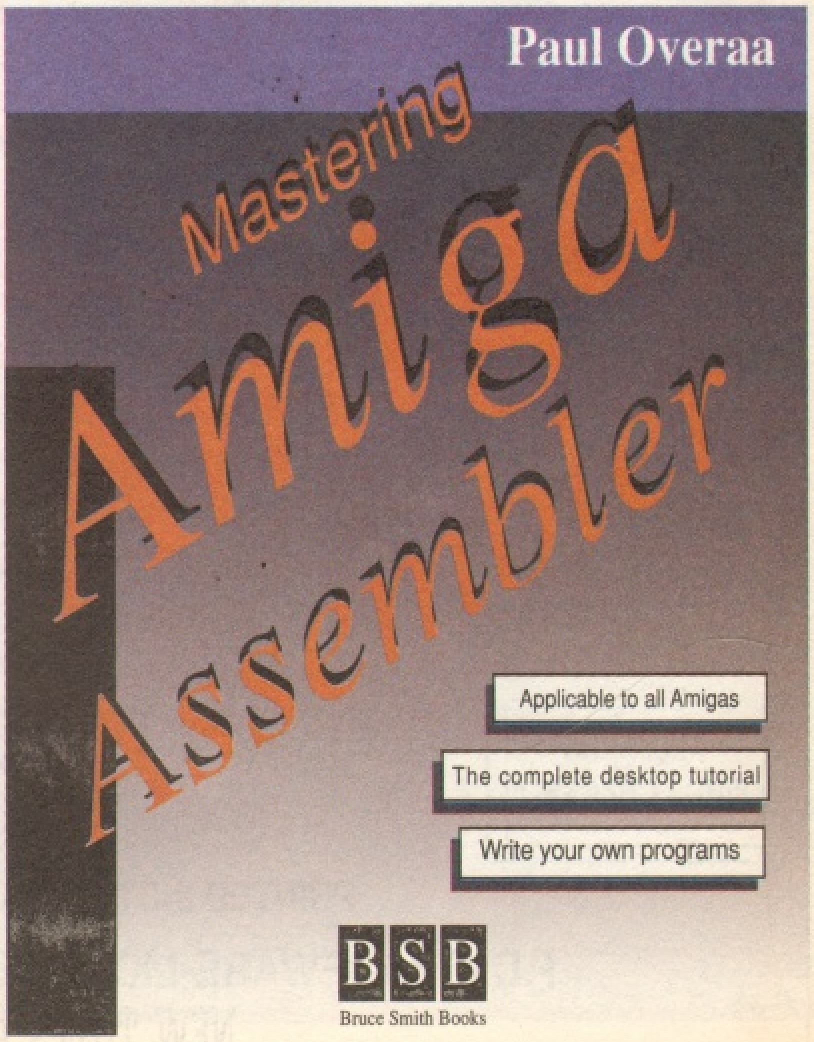
Phil starts by describing fundamental concepts, such as how the program works, what the editor menus are for, and so on, before moving on to talk about program structures, procedures, variables and other stock-in-trade programming elements. The book then progresses through a variety of topics which will be useful to you regardless of the type of program you're writing. I was particularly pleased to see the section on maths functions which briefly summarises the availability and purpose of *AMOS'* maths commands.

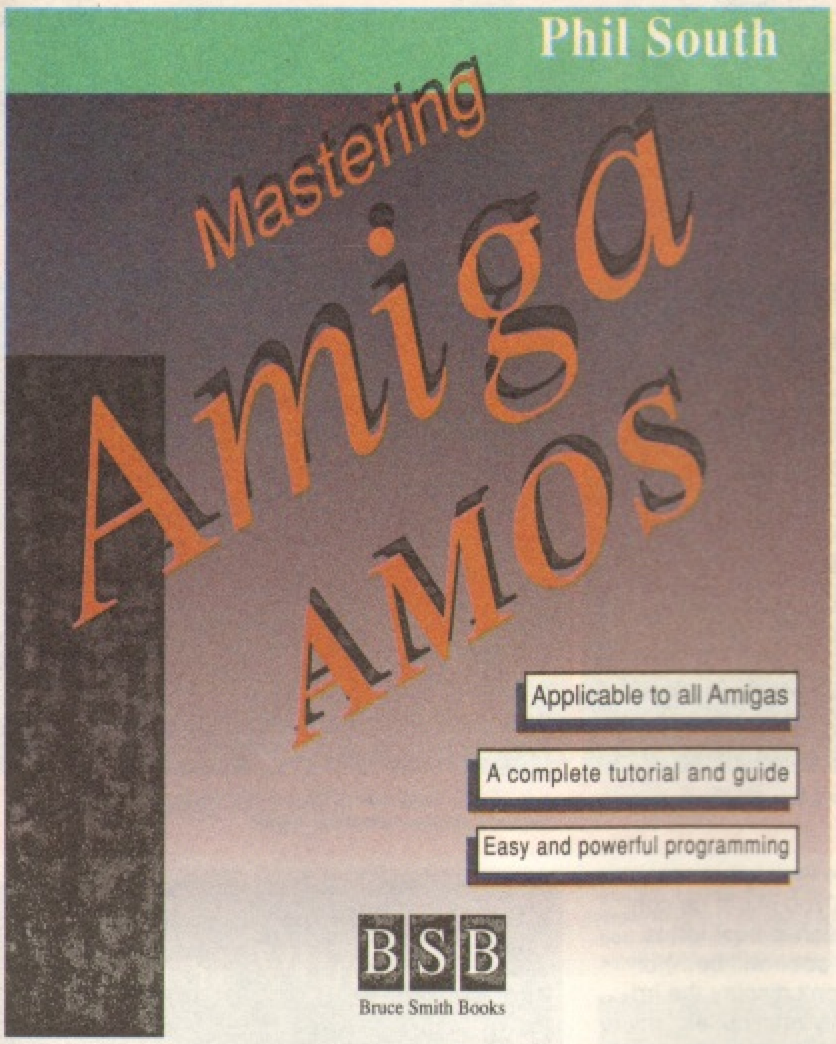
The book is copiously illustrated with sample programs, which are certain to speed up the learning process as you type them in and work out what they do.

There are also entire chapters dedicated to Graphics, AMAL, Music and Sound, The *AMOS* Compiler, TOME, *AMOS 3D* and disk operations. Better yet, the book even covers *Easy AMOS* and *AMOS Professional*, demonstrating that Phil is bang up to date on *AMOS* development.

If you own *AMOS*, but felt that the manual assumed a bit too much knowledge of the Basic language, this is the book for you. Similarly, if you're considering buying *AMOS*, *AMOS 3D*, *Easy AMOS* or *AMOS Professional*, you should include this book in your deliberations. It may not be absolutely essential, but if you want to save yourself a lot of unnecessary aggravation, this is the way to do it!

Available from: Bruce Smith Books Limited, Smug Oak Green Business Centre, Lye Lane, Brickett Wood, Herts, AL2 3UG. Tel: 0923 894355.





AMIGA FIVE-O
KUMA: £9.95

This ill-conceived and poorly executed book purports to be the ultimate reviews'n'tips guide for the hardened Amiga gamesplayer. In fact, what you get for your money is 184 pages of misinformed and misleading drivel which tries hard to be an authoritative tome on Amiga games, but fails because it basically falls between two stools. On the one hand, it presents itself as the essential Amiga games guide by covering the (supposedly) top 50 Amiga games, and on the other it attempts to include player's guides to almost 30 of these games. And that's the problem. The reader is never really sure whether they're reading a review or a hints'n'tips treatise, as the two are often amalgamated into one unwieldy mess. I really haven't any idea why this approach was taken, but presumably it seemed like a good idea to the book's author, Ashley Cotter-Cairns, at the time!

Reviews range from half page 'shorts', to full-blown two-pagers, but most are particularly bland affairs which would almost certainly have been binned or extensively rewritten before they found their way into CU Amiga's Screen Scene review section. Obvious games, like *Project X*, *Speedball 2* and *Monkey Island 2* appear, but then stuff like *Daily Double Horse Racing*, *Dylan Dog*, *Tiny Skweeks* and *Bargon Attack* are also included – most bizarre and hardly representative of the top 50 Amiga games of all time. Most offer little relevant information and the humourless manner in which they're written proves hard going at times. Many also come accompanied by 'Ash Smash Tips', small end paragraphs offering supposedly useful info on getting the most out of the game. These really are a waste of time, offering few practical tips. For instance, the one that accompanies the review of *Civilization* advises the player to 'spend an afternoon reading the manual before you even think of loading it up'. Yeah, thanks for the words of wisdom Ashley.

And then, suddenly and without warning, you're reading a player's guide. This is most disconcerting, as you never quite know when this is about to happen nor which games have been tipped. The contents page offers no clues, either, and merely lists the games that appear in chronological order. The tips themselves vary from poor to good, although many are merely rewrites of stuff that's appeared in mags or been obtained from publishers. If you're looking for detailed player's guides, then you won't find them here – the ones included are almost always general hints and tips rather than step-by-step walkthroughs.

All games are split up into seven different catagories, ranging from Arcade and Sports games to Strategy and RPGs. Each section has an introduction, and each review-cum-player's guide is accompanied by an overall rating. There's also a 'Spotlight' page-filler at the end of each section where Mr Cotter-Cairns spouts off about a subject of his choosing, such as the new A1200, piracy and CD-Rom games – these rambling pieces seem at odds with the rest of the book and are as curious as they are banal.

And that's it. Amiga Five-O is a bland read at best and certainly not worth the ten quid asking price. I only hope you read this review before it's too late!

Available from: Kuma Computers Limited, Pangbourne, Berkshire. Tel: 0734 844335.

AC'S GUIDE TO THE COMMODORE AMIGA
AMAZING COMPUTING: $9.95

How many times have you wanted to find out about some half-remembered program or piece of hardware and had to resort to flicking through the pages of years worth of magazines in a vain attempt to find it? What about those times when you want to know if a particular program even exists? Is there a version of *DBASE 4* or *Zaxxon* for the Amiga? These and many more programs can now be answered thanks to AC's Guide to the Amiga, the definitive Amiga reference source.

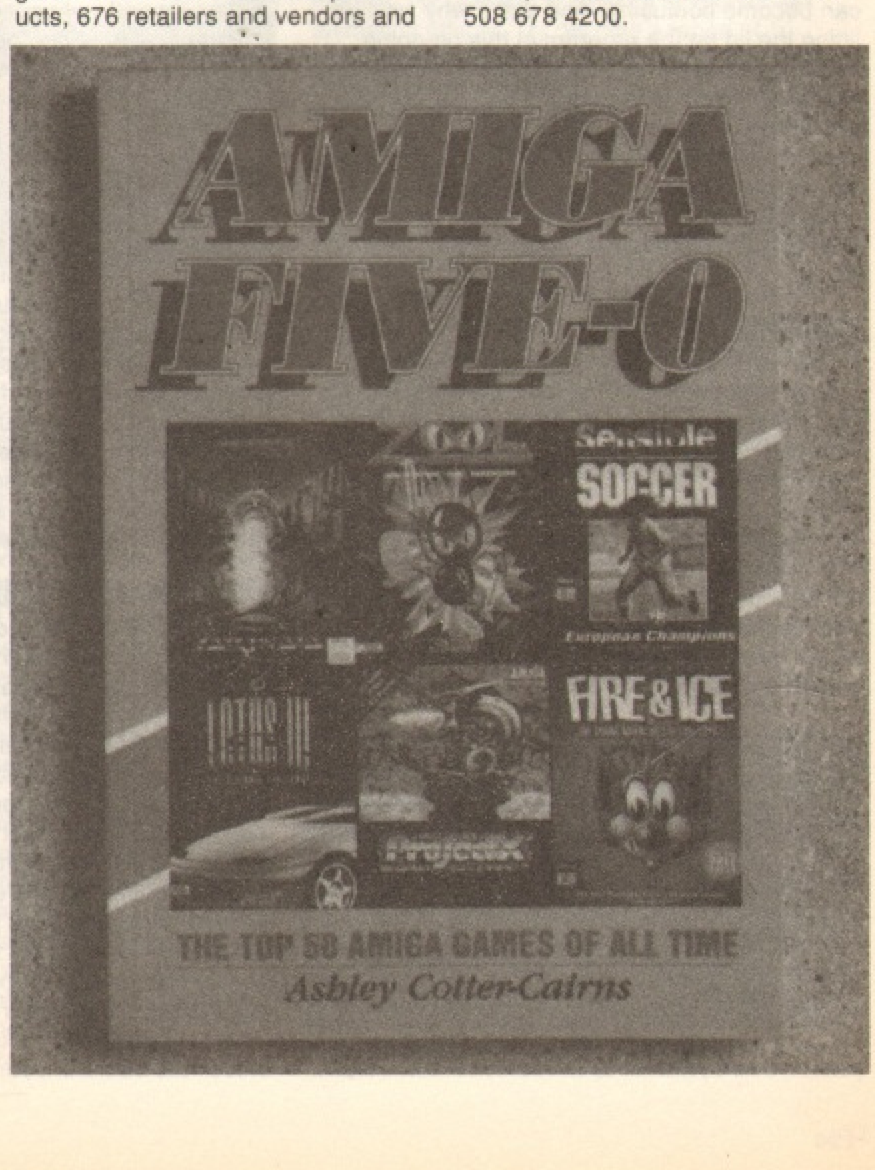
The guide is a bi-annually published American magazine of some 260 pages containing no graphics and very small type, so there's a humungous amount of information available in each issue.

AC's Guide is basically a massive international product reference guide which lists over 3400 products, 676 retailers and vendors and 389 user groups. Products are Software, Hardware, Miscellaneous and PD and Shareware. Each of these areas is then further sub-divided. For example, the software chapter includes sections on Graphic Arts, Desktop Video, Business and Home Productivity, Entertainment and Utilities, to name but a few of the categories. Each product is briefly described, and ordering details including prices, addresses and telephone numbers are given. The guide also includes a complete listing of the entire Fred Fish and Amicus PD collections.

There are six different indexes to ensure that the Guide is as accessible as possible, and these are backed up by a summarised vendor listing containing the addresses of every vendor in the magazine.

There are flashier looking British magazines, which attempt to offer a similar service, but make no mistake, they are just pale imitations of the real thing! Not only do they barely scratch the international market, but they don't even have a fraction of the scope or number of entries contained in this guide. If you ever needed an Amiga product reference, this is the only way to fly! Incidentally, AC tell me that they are seeking a European distributor, so if anyone out there is interested, get in touch.

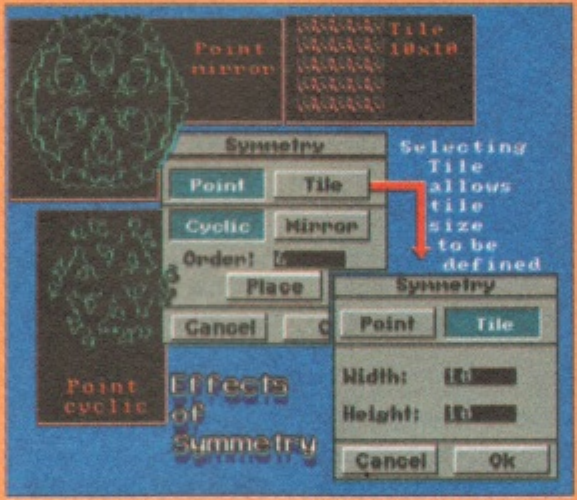
Available from: Amazing Computing, PO Box 2140, Fall River, MA 02722-2140. Tel: 0101 508 678 4200.



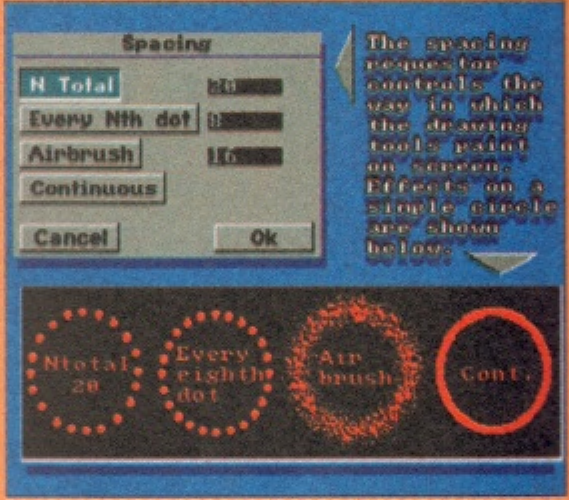
Deluxe P

You too can draw! No, this isn't one of those cheesy adverts which get printed in mags alongside offers for X-ray specs and mail-order lingerie; it's a genuine promise from our graphics wizard Peter Lee to help you get the most out of Amiga artwork through the magic of Deluxe Paint.

PART 1



Symmetry is a fun tool, and one which offers quick and easy rewards through experimentation.



Not an easy requester to fathom, but the examples show how different choices affect the output.

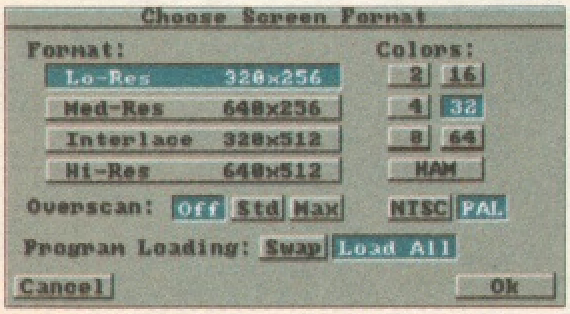
NON-BELIEVER

Heard it all before? Confidence taken a nose-dive? Why? Think about it – everyone starts somewhere, and believe me half the battle's won when you know the software inside out. Which is where this series comes in. *DPaint* is a highly complex tool which has grown over the years to meet the demands of professional and hobbyist alike. Electronic Arts' great art package sizzles with features – so many in fact that simple things can become confusing. And that's why we'll be lifting the lid on the program in this on-going series; making all the major features accessible, with examples and expert tips you can try yourself. Because once you can control the mechanics of the program, you'll find your ideas can be translated to the screen, and your artistic skills will grow on the bedrock of some very powerful graphic techniques. Ready? Then let's begin...

BASICS

Rules – a sad fact of life. You meet the major *DPaint* rule when you first start the program. It's the mode/colour trade-off. You can have a high-resolution mode with fewer colours, or a low-res mode with 64. Which to choose? It clearly depends on what you have in mind for the finished work. The only time I use high-res is for video titling or for creating logos which will be either photographed or genlocked onto video. Most people gladly trade off resolution for a larger number of colours; and the lower your resolution and fewer your colours, the more memory you have for any animations you might be contemplating. The interlace option is best left to sight-impaired users (...they soon will be...) or those with monitors which don't display the irritating flicker. Overscan is only really useful if you are working with video in mind (it extends the boundaries of the picture beyond the screen limits so there isn't a border around it). If you have less than 1Mb of RAM, it's best to click on the Swap button so that the program loads the information it needs when it needs it rather than loading it all in at one go. We'll be covering HAM (4096 colour Hold And Modify mode) later; it's a major asset with the latest release of *DPaint*, but flaky enough to give us a few problems. Right now let's think positive. After selecting your screen type you get that familiar, unnerving blank screen and tool icon strip that has challenged Amiga artists since the dawn of time (or at least since 1985, if you're being picky).

You may find it useful to remove this toolbox from time to time to reach parts of your image which it covers up. Pressing F10 toggles the icons on and off. Right from version one, *DPaint* has had this irritating quirk; if you draw out a shape which goes 'under' the toolbox, the area of screen hidden by the tools will remain blank. This holds good too for fills, so get into the habit of removing it when needed.



Decisions, decisions. Do you want lots of colour or pin-sharp pixels? It's make your mind up time as soon as *DPaint* begins.

QUICK ON THE DRAW

Using ordinary tools to draw with is a doddle (or doodle...), but computers are a lot smarter than pencils and paintbrushes. Always bear in mind that the opportunities offered by *DPaint* actually raise your artistic skill level. For instance, how many people do you know who can draw a straight line (or curve for that matter) freehand? You can probably count them on Hook's bad hand. And this is the simplest example of how using computer software can give you a real head start. But drawing lines is just the tip of the iceberg. What happens to the image underneath as you draw is one of the great thrills of computer graphics. This brings us to the Mode menu, where a click of the mouse button can help unlock the doors of your imagination.



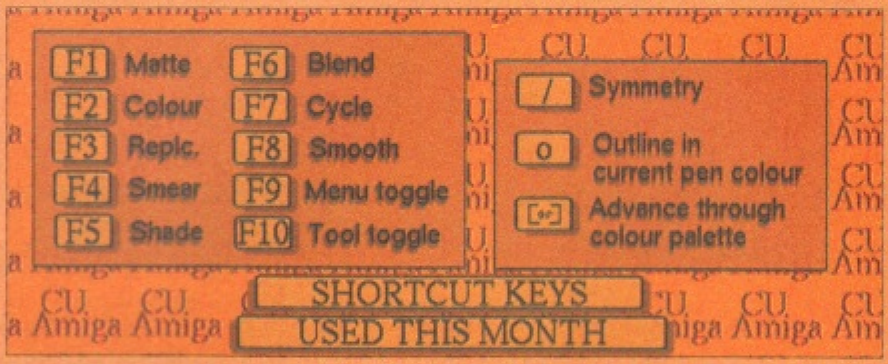
Your at-a-glance-guide to the tools menu. Right-clicking on several (such as symmetry or line) lead the way to even greater control of the program.

UNDERCOVER WORK

DPaint IV offers 10 very powerful painting modes. Most mode selections only take effect if you have some artwork on screen (they need source colours to work with), and they can use either one of the default brush shapes (the pens), or sometimes the shape of a custom brush (one you've cut out yourself). The matching commands in *DPaint III* work in identical ways. Here's a brief outline of what each does – and an example which shows off the technique, plus a peppering of useful tips:

Matte – This uses any custom brush you decide to pick up or load in as the painting pen. Any background colours present when you picked up the brush are transparent. This is the default mode when you cut out a brush, and you use it for repositioning parts of your image, or cutting and pasting in different locations. TIP: The last brush you used is always available (even after you've been drawing with other tools such as pens or shapes) by right button clicking with the pointer on the brush selector tool. If you've got an animbrush in memory too, this can also be called back on screen in the same way.

aint



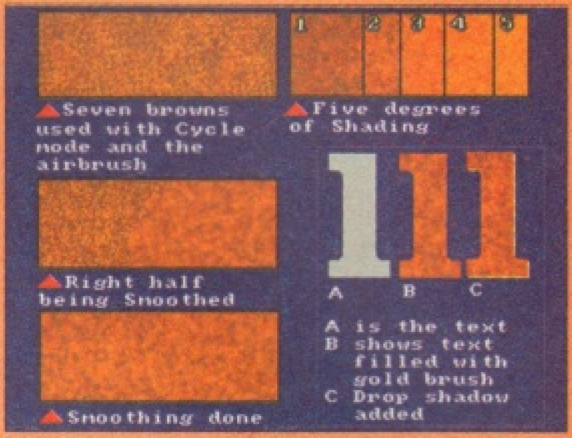
A quick guide to the shortcut keys used in this month's tutorial. You'll save loads of time if you can remember a few.



Ghostly-goings on, courtesy of DPaint. Special effects are a breeze with a few simple mode options.



Combining several drawing modes leads to some sophisticated effects.



You don't need spit and polish to make the Amiga shine, just the know-how; and here's how!



They broke the mould with the Amiga! Four steps to getting the realistic metallic look which is really attractive – and above all, easy.

Here's how to do a ripple reflection. Cut out your text brush, and flip it vertically (hit the 'y' key). Stamp down the upside-down image, then using smear mode, mix up the reflection horizontally to give the effects of a liquid reflection on. Using a small brush and the straight line tool gives consistent results.



Colour – Creates a solid shape of your brush in the current foreground colour. Extremely useful for placing a brush's shadow before stamping down the brush as a matte. TIP: While drawing with an in-built brush, or a custom brush using the matte mode, you can quickly cycle through the palette's available foreground colours by hitting the open and close square bracket keys [], so your brush is the right colour.

Replc – Very similar to Matte, except there are no transparent colours. TIP: Remember that using *DPaint's* quick key shortcuts cuts down on time. Pressing F1 will make the brush into a Matte form, and F3 will bring it back to Replc mode. You can see the difference on screen and decide which mode suits your needs before having to commit the brush to the screen.

Smear – This blathers pixels around like so many grains of sand. It's great too for adding granular texture to objects, but lacks finesse. TIPS: The bigger your brush, the rougher the smear gets, and unless you're careful too much smearing can destroy the shape of your original object. Incidentally, if you want to enlarge one of the program's in-built brushes, to smear large areas at a time, here's how. Click on an in-built brush with the right button, then move onto the drawing area and drag out a new sized brush to suit your needs.

Shade – For this mode to work, a range of colours should have been previously defined. It allows you to pass a brush over a colour in the range, press the left button and replace it with the next highest colour. Pressing the right button as you draw changes the underlying colour to the next darker colour. TIP: The greater the number of colours in the range, the better. This mode is wonderful for adding highlights to metallic objects; but don't be too heavy handed or else the colours tend to move to the extremes of light and dark too quickly. If you choose a palette colour not in a defined range, *DPaint* will use the whole palette, which serves no useful purpose!

Blend – The program will try to soften the edges where colours meet by adding a third, averaged colour. Ideal for making smooth transitions – as in light to dark skies, or where clouds are drawn, to soften the edges. TIP: *DPaint* does its best, but if there is no real average colour in the palette, results can be unpredictable. Make sure your pale palette reflects the mid-tones of any colour sequences to give the software a chance.

Cycle – This mode only works with a colour from a previously defined cycle range, and as you draw the colours are cycled through in turn. A big help in drawing objects which will need smoothing and smearing later; rocks or dirt, for instance. By defining a range of five or so different greys or browns, then cycling through them as you paint, you add light and dark elements automatically. Smearing the result to mix up the pixels, then smoothing in places cuts down on the creation process enormously. TIP: Cycling is ideal for single-screen animation effects. Try defining a range of 10 colours, making one white and all the rest black. Cycle draw on screen after pressing the TAB key to activate display cycling, and watch the flickering fun! Pressing TAB again switches off cycling.

Smooth – This is a kind of on-the-fly anti-alias mode. It cuts down on jagged edges which sometimes plague low-resolution images, by adding an intermediate colour to fool the eye into thinking there is a seamless join between two colours. Again, the greater the range of similar colours, the better the smoothing will appear. TIP: If you smooth an image on a black background, intending to pick it up as a brush, be warned that the edges between colour and background will have had extra pixels added (the smoothing edge). So, when you come to paste the brush down onto another scene, you may get an unwanted dark outline. This can be remedied in part by stripping the outer edge of the brush (Shift-O) as an emergency measure.

Mix – Using the current brush palette you can mix and blend underlying colours. This is useful in HAM mode, but you may prefer to mix your colours systematically in the palette requester, where you have total control over them. It can be a flaky mode at best, but if weird is what you want, give it a whirl.

(*Tint*) In *DPaint III* Mix is replaced by Tint. Tint allows you to use one of *DPaint's* in-built brushes together with a range of colours to tint the underlying image. For instance, if you had an image of a field on screen, by using a range of whites as your tint colours you could add snow to the scene without destroying the underlying structure. TIP: The ➤

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Examples of some of the effects available in *Deluxe Paint*. Combining several of them can produce an interesting result. Some of these effects would be impossible in normal design terms, even for an accomplished artist, without the aid of a drawing tool, such as *DPaint*. But with it, these complex tricks can be carried out in very little time indeed.

greater your range of tint colours, the more realistic the effect will be. *DPaint III* Tint does not work with custom brush brushes unfortunately.

HBrite – This feature uses the 64-colour mode's alternative colour set to darken the original 32-colour palette. Great for shadows and highlights. TIP: If you have a HAM picture and want to work on it in a more regular resolution, you can change screen formats while the picture is being displayed in HAM, and choose 64-colour halfbrite. This way, though you will obviously loose thousands of colours (you would anyway) you maximise the colours available for the transition. It depends on your original of course, but a lot of times the conversion works very well.

DRAWING ATTENTION

DPaint's toolbox is the starting point for any work. It contains basic drawing tools and 10 in-built brushes, and also accesses many user-definable options. The standard tools – freehand drawing, straight line and curve work with whatever brush you have currently selected; so too do the outline tools – circle, rectangle, ellipse and polygon. But by clicking the right button on some tools opens up requesters which perform little pieces of computer magic.

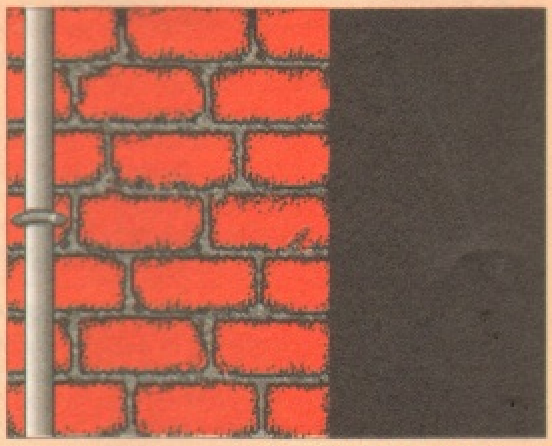
Take spacing requester, for example. Right click the straight line tool, and DPaint will ask for input into a Spacing definition requester. You have the option of telling the program how often along your line to paint the brush. If you select the N total and input a figure, then every outline shape you draw (including line, circle and rectangle), will have just that number of brushes painted on screen. For example, if you had the large round in-built brush selected, and chose 20 as the N total, when you drew a straight line – of whatever length – it would look like a series of dots instead of the usual continuous line. By selecting instead the option 'Every Nth dot', and entering a figure, you maintain the distance at which the brush is painted; this means that however short or long your line, the brushes are the same distance apart. Choosing the airbrush option on the requester uses the airbrush tool, with your input defining the number of airbrush sprays to be used to each pixel along the path.

THE WRITING'S ON THE WALL

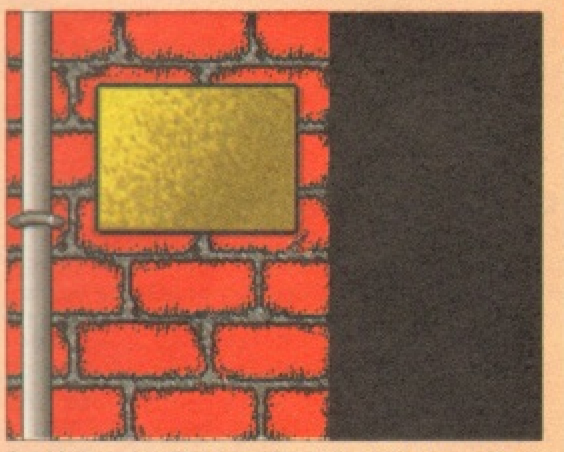
Ever had the urge to pick up a can of paint and spray something on a wall. No, I'm not admitting to it either, but *DPaint* lets you express yourself in the comfort and safety of your own room. This example calls on many of the techniques discussed in the main article, and gives a visual guide to exactly how each mode can be used to best advantage.

Take the wall. There's just one brick there – no labour of love; the image of that brick is flipped in the X and Y planes every so often to give an appearance of randomness (to do this, pick up a brush and simply press the X or Y keys). The brick starts out as a small red rectangle. Using cycle, with three shades of red selected, it's possible to give a random graininess to the rectangle. Depending on the results, you can either settle for that, or use Smear to mix up the red pixels.

To add authenticity to the brick, we need to knock it about a bit, so using black as your brush colour, and the spray brush, eat away around the edges of the rectangle to create a lifelike (or brick-like) brick. Pick this up as a brush now, and using the filled rectangle tool, colour the area of your wall in grey, for the mortar. I like to cycle a number of greys around the area now for added realism, but really, one grey will do. Don't worry about losing your brush – right mouse click on the brush window, and your last brush will always re-appear. To add depth to the brick, we have to outline it; so with black selected as your pen colour, and the brush active, press the 'o' key on the keyboard. You can now lay your bricks in the regular pattern, with bricks on top overlapping the edges of adjoining bricks below. Remember to flip the brick frequently in either X or Y plane for better realism. The gold plaque uses the cycle, smear and smooth techniques discussed earlier. What is new, however, is the white spray paint. You can see the wall and mortar underneath the paint; this is a clever feature of both *DPaint III* and *IV* (although available in the Mode menu of DPIII, it is hidden in the Process menu on the later version). Although you will be painting with one colour, *DPaint* needs a range of that colour if it's to match up what you're painting on; if your bricks have three reds, then there needs to be three different whites to match the change in intensity as you paint. So, along with the reds, you need to define a similar range of whites, from dark to light. With tint selected, as you paint with one of the program's in-built brushes, the background colours change whilst leaving the drawing structure intact. This way the spray-paint effect looks realistic. This technique can also be used for creating shadows, and also for mimicking glass objects, where the colours showing through are affected by the glass itself (though not as much as artists tend to go for; but you're creating an impression on screen, not taking a photograph).



The wall is built from one brick, which has smeared and smoothed reds as its basis. Used as a brush and flipped occasionally, the brick quickly becomes a wall, and the drainpipe is simply an undithered fill using a range of greys.



A gold plaque is added by cycle-painting with a range of yellows, smearing and smoothing, then highlighting with the shade mode.



Text is written, then filled with a high degree of dithering using the range of yellows. Once smoothed, even though the letters are small, they burnish like gold. The 3D effect is simply a drop shadow (stamping the brush down first in colour mode, using a dark colour, then offsetting the original brush.



Graffiti is added with in tint mode, to preserve the highlights of the underlying brickwork and cement.

NEXT MONTH

Each and every month, Peter Lee will be explaining how to get the most out of your copy of *DPaint*. If you're a complete novice or even an expert with years of experience in computer graphics, there will be something of practical benefit to you both. Next month Peter explains the intricacies of the symmetry tool, and how it's use can save hours of work. Also, he will show you how to have fun with fills and brushwork. Plus many more tips. Till then, keep doodling!

C FOR BEGINNERS

PART 3

Are you going loopy with C programming? John Kennedy repeats until you get it right in the third instalment of his tutorial.

STICKS AND STONES

To be in any way useful, a programming language must offer three basic coding features. As with most easily grasped concepts, computer scientists like to give them important names to put off beginners, and here they are: sequential coding, conditional coding and repetitive coding. We have already looked at the first two features – the first is more or less taken for granted as the 'flow of control' through a program, the second we examined last month through use of the IF statement. Now we'll look at the third feature: repetition. Now we'll look at the third feature: repetition. Now we'll look at the third...

ONE, HA! HA! HA!

Imagine that you need a program that counts from 1 to 10, and prints each number out in turn. Perhaps the most obvious way to achieve this is to use 10 different print statements (see Table 1).

TABLE 1

```
/* Counting to ten */

main()
{
   printf("1\n");
   printf("2\n");
   printf("3\n");
   printf("4\n");
   /* ... and so on. */
}
```

Although slightly tedious, this program works perfectly well. The snag occurs when you discover that what you actually needed was a program that counted from 1 to 1000 – would you be willing to type in a thousand lines of code to achieve something so simple? (If you would, CU would probably like to employ you as a games reviewer.)

The trick is to use loops – pieces of code which automatically execute themselves again and again. The simplest loops are those which know before they are called how many times they are to repeat, and in the C language they are called FOR loops. Programmers who have used BASIC or *AMOS* will find them similar to the common or garden FOR-NEXT loop.

WHAT FOR?

A FOR loop makes use of a variable, and needs three pieces of information before it can start. In TABLE 2 our counting program is rewritten to make use of a FOR loop. It's a great deal shorter than the original would be!

Notice that the code which is to be executed inside the loop is enclosed in curly brackets to form a separate 'chunk' of code. It turns out that when only one statement follows a FOR loop, you don't really need the brackets but I've left them in to makes things slightly clearer. The indentation used is entirely up to you – I think this way makes the code quite clear.

TABLE 2

```
/* Counting made easy */

main()
{
   int counter;      /* an integer variable */

   for (counter=1;counter<=1000;counter++)
   {
      printf("%d\n",counter);
   }
}
```

You should be able to work out the information FOR needs quite easily, especially if you remember the special C short cuts we looked at last month.

FOR uses a variable to do the counting, so logically the first thing it does is to assign a value – in this case 1. I could have used any integer other than 1, but since the problem was to count upwards to 1000, where better to start.

As usual, a semi-colon separates the C statements and the next one is a condition – the FOR loop will only happen if this statement is true. In this example, we want the loop to execute only while the variable counter is less than or equal to 1000. The last statement is a short cut for 'counter=counter+1' – which does nothing more sinister than increment the variable counter. If there was no increment instruction, the loop would continue for ever, as the counter would never change and the condition would never become false. In fact, sometimes you may want this to happen – if so, you don't need to specify any of FOR's parameters (see TABLE 3).

TABLE 3

```
/* Forever and ever and
ever – don't run this! */

main()
{
   for (;;)
      printf("From here to
eternity...");
}
```

RECYCLING

The next example program demonstrates how the loop variable can be made use of more than once within a single program. The loop variable is an ordinary variable, and can be used in the same way as any other – there is nothing special about it being used as a FOR loop counter. Remember that although it is called 'counter' in these examples, you can call it anything you like in your own code (see TABLE 4).

PROBLEMS, PROBLEMS

Your homework for next month is related to this program. To be awarded a gold star by teacher, you have to re-write the above simulation program to do the following:

TABLE 4

```
/* Lift simulator program */

main()
{
   /*declare our variables */
   int counter;

      /* First part of simulation -
      the lift it going to top floor */

   printf("Lift going up!\n");

   for (counter=1;counter<=5;counter++)
   {
      printf("Floor: %d\n",counter);
   }

   /* Second part of simulation -
      the lift is going to ground floor */

   printf("Lift going down!\n");

   for (counter=5;counter>0;counter—)
   {
      printf("Floor: %d\n",counter);
   }
}
```

1. Make the lift travel up and down, three times – not just once.
2. Add a basement to the building – when the lift is there, the program should display 'Basement' and not 'Floor: 0'.
3. Use functions to make the program clearer – one for when the lift is going up and one for when the lift is going down.

Oh, and an apple would be nice as well.

DO DO DO

C offers other loop constructs, which are slightly more flexible than FOR in that you don't need to know how many times they should repeat before they start. You don't even need a variable counting up or down – a simple condition is all that is required.

It's always easy to make up a realistic example which demonstrates the finer points and is still under three pages long, but the following programs should help you understand what's happening. In the first program, notice the order

in which the DO and WHILE appear – it's almost like English: 'DO this chunk of code WHILE this condition is true' – TABLE 5.

TABLE 5

```
/* WHILE example program 1 */
/* Print powers of 2 */

main()
{
  int count=1;

     do {
        printf("Inside the loop! (%d)\n",count);
        count=count*2;

     } while (count<2000);
}
```

As the condition checking is carried out after the main loop body has been executed, it is fair to say that the loop will always be executed at least once. That is, even if the condition after the WHILE is false the very first time they are checked, the loop contents will have already been executed.

Sometimes this isn't what you're after, and although conceivably this problem could be taken care of with an extra IF within the loop, there is a neater way. If the DO is dropped, and the WHILE moved to the start of the loop you get a program which looks like TABLE 6.

TABLE 6

```
/* WHILE example program 2 */
/* Powers of two again */

main()
{
    while (count<2000) {
       printf("Inside the loop! (%d)\n",count);
       count=count*2;
    };
}
```

This construct performs the check before the loop is carried out, and tends to be the more popular form. In these examples, the form used is irrelevant, but in other cases – file handling is a good example – you need to ensure the loop contents are sometimes never executed.

When writing your own programs, the trick is to decide when you want to check to see if the loop should terminate – this will tell you which loop type to use.

BREAK OUT

Now back to that forever loop – the program you shouldn't run. Thankfully, there is a way to escape from inside such a loop, and in fact it will also escape from any loop, WHILE or FOR, infinite or not. The secret to tunnelling out is to use the keyword BREAK. BREAK will always bump the flow of control immediately outside a loop, no matter what the current situation is. For example, here is a program that uses a loop to count from 1 to 100, but never gets past 50 – see TABLE 7.

TABLE 7

```
/* Take a break */

main()
{
  int count;

    for (count=1;count<=100;count++)
      {
         printf("Inside the loop!");
         if (count==50) break;
      }
}
```

The BREAK will work just as well inside a for(;;) loop – so you could use it to allow the program to continue only if a certain condition is met.

LOOPS WITHIN LOOPS

Let's say you want to write an image processing program which will look at every pixel in a display, perform an operation on it, and write it back. In this case, you will need two loops – one to scan from left to right, and one to scan from top to bottom. Using two FOR loops inside one another, the entire operation is very simple to code.

TABLE 8

```
/* Screen scanning program */
/* Note: assumes the screen to be 320 wide */
/* by 256 tall. Also assumes the following */
/* functions – ReadPixel(X,Y), WritePixel(X,Y,P) */
/* and ProcessPixel(P) – are available. */

main()
{
  int X,Y,P;  /* Three integer variables */

   for (Y=1;Y<256;Y++)
     for (X=1;X<=320;X++)
     {
        P=ReadPixel(X,Y);
        P=ProcessPixel(P);
        WritePixel(X,Y,P);
     }
}
```

Notice how I have left out the curly brackets from the code following the first FOR statement. As there is in effect only one statement following it, the brackets are optional. The second FOR has a list of three operations to carry out, and so they must be enclosed in curlies.

I hope you can see how a sensible choice of variable and function names, as well as good spacing, has made the entire program very simple to understand.

When using BREAK within nested loops, remember that it will only take you outside the current loop. To escape from inside a double nested loop using BREAK, you would need to set a variable, and perform a BREAK inside both loops depending on the variable. This is a bit messy, but I am afraid that you are going to have to wait until next month for an explanation of how you might go about tidying this process up.

GOTO...

Something you may have noticed is the example programs is a complete lack of GOTO statements. With a BASIC-type language, any program with even a small number of conditions or loops would be coming down with GOTOs and starting to get a little difficult to follow in places.

The designers of C have provided enough in the way of control features to ensure that you will never actually have no choice but to use a GOTO, however rather than be accused of being overbearing, they have provided the option. It's true – even the ultra structured language C can be made to look like BASIC if you really want it to.

Take our screen scanning program as an example. Imagine we only need to scan the screen until a pixel of value 42 is found. Without GOTO we would need two BREAK statements and a variable acting as a flag. In TABLE 9 there's agood example of how a GOTO could actually be a Good Thing:

TABLE 9

```
/* Screen scanning program 2 */
/* scans until pixel of 42 is found */

main()
{
  int X,Y,P;  /* Three integer variables */

   for (Y=1;Y<256;Y++)
    for (X=1;X<=320;X++)
     {
        P=ReadPixel(X,Y);
        if (P==42) goto found;
     }

   found: /* our label for the goto to go to */

    /* continue */
}
```

HOMEWORK SOLUTION

Last month I left you with a little teaser – when would mixing up a condition checking '==' with an assignment '=' ever be useful? The answer is a resounding 'probably never'. Any statement that looks like this:

```
if (variable=1) {...}
```

will ALWAYS be true, because the contents of the brackets which form the condition are 1, and this is treated as true by the compiler.

Similarly, a statement such as

```
if (variable=0) {...}
```

will always be false, because the condition expression is zero, which is treated as false by the compiler.

Mixing up the two symbols is one of the first things you should check for when your program starts to misbehave.

To see what values your compiler thinks are true and false, try the following program:

```
/* What are TRUE and FALSE? */
main()
{
   printf("Equals     = %d\n",(1==1));
   printf("Not Equals = %d\n",(1==2));
}
```

LOOP SUMMARY

There are three main ways of coding a loop in the C language.

1. FOR loops
   for (<assignment>;<condition>;<increment>) <statement>;
2. DO-WHILE loops
   do <statement> while (<condition>);
3. WHILE loops
   while (<condition>) <statement>;

It is also possible to write loops using a GOTO statement, but this is not recommended. A GOTO is better used as a last resort 'get out quick' option from within heavily nested loops.

NEXT MONTH

John Kennedy will complete his explanation of loops and describe how to make functions a whole lot more useful by using parameters.



Mat Broomfield puts on his serious thinking cap to answer another monthly round of reader's questions.

With the New Year so recently passed this month's Q&A has a decidedly creative and entertainment feel to it. Mat's answered some of your game related questions as well the usual bunch of technical ones.

SAMPLE SOLUTION

I wish to increase my collection of samples for use with *OctaMED*. The obvious solution is to buy a sampler so that I can record samples from my record collection. I've seen advertisements for packages which offer you the ability to sample via a cartridge. Is this all I need? I would have assumed that I would need some expensive hardware. Could you please give me information and your recommendations? I certainly need them!
Grant Hogg, Udston, Hamilton

Most samplers simply plug into the parallel port at the back of your Amiga, although one or two of the older ones use the serial port. If you own a 1500 or higher, you can also buy internal samplers which come on a card that plugs into one of the internal expansion slots.

The only other thing you'll need is a set of leads to connect the sampler to your hi-fi. Most samplers are supplied with some sort of leads, although they would only cost you about a few pounds from any high street electrical or music shop anyway.

As far as I know, all samplers are supplied with sampling software, although if you prefer you can use software that you already own. Many people like *Audiomaster IV* for editing samples.

The sampler you buy obviously depends on your budget. At the top of the range (about £200), there's *Audio Engineer*, whilst £100 will get you *Sound Master* (my personal favourite). In the budget range (£30-50) *Master Sound, Technosound Turbo* and *Megamix Master* are all competing for recognition. Technosound seems the most popular of these.

LANGUAGE LEARNER

I have been wanting to learn how to program in one form or another for the last year, but I can't decide whether to go with C or Assembler.

I'm interested in writing games, utilities and business software and I would like to know which language would suit me best. I have very little programming knowledge so would it be best to learn a high level language? I have seen a book called 'C By example' (by Greg Perry) in my local bookshop. It looks like the best thing for a beginner, do you agree or would you recommend something different?
Christian Cove, Stratford-Upon-Avon, Warks

Both C and Assembler (Machine code) can be used for writing the type of programs that you describe, but there are a number of differences between the languages which may make a difference to your decision: Machine code is usually specific either to a particular processor or family of processors. Therefore, learning to program on one machine (an Amiga) doesn't necessarily mean that your skills will be much use on a different one (an Archimedes for example). The language consists entirely of numerical instructions used to perform different operations, although with an assembler you can use pneumonics instead of numbers, so that your code is a bit easier to understand. Because everything is represented numerically (or pneumonically) programs can be hard to read, and even harder to debug, which is why the language is so difficult to learn. However, programs written in Assembler run at the fastest possible speed (assuming they've been properly written).

C programs are much closer to Basic in that they use almost-English commands, hence they can be read and decoded much more easily. It also means that the language is a little friendlier to learn. However, creating a C program is a multi-stage process which involves, linking, debugging and compiling, and some people find this a little laborious. It will help if you own a hard drive, lots of memory and/or at least one external disk drive. The great advantage of C programs is their portability; broadly speaking, programs that work on one computer will also work on another, and the only changes that will need to be made, are machine specific hardware and output calls which will need to be modified to the capabilities of each computer.

I've never heard of the book you refer to, but it sounds as if it's a generic title, referring to the language without any special considerations for the Amiga. When looking for language tutorial books, you should ALWAYS try to find Amiga specific titles. The Amiga's operating system is almost as much work to learn as the language itself, and if you have to learn about that separately you're only making things hard for yourself. You might like to consider: 'Mastering Amiga C' – Bruce Smith Books (ISBN 1-873308-04-6). You can order it from any bookshop. It's specifically adapted for use with the Lattice compiler, but it also supports North C, a public domain compiler.

BARS AND PROBS

My friend and I went half each on *Bars and Pipes Pro*, but we're having a lot of trouble learning to use it. We found your *OctaMED* and graphics tutorials very useful, and we were wondering if there's any chance of some help with *B&P*?
Anon, Sweden

We're probably going to be doing a *Bars & Pipes* special sometime within the next couple of months. Keep checking Amiga Workshop.

A600 QUESTIONS

I've just purchased an A600HD and I was wondering if you could answer a few questions for me?

1. Is there any way of manually mounting the hard drive partitions, instead of the computer doing it automatically?

2. My 1Mb trap door expansion isn't called Fast RAM, whereas it was on my A500. Why not, and how do I get Fast RAM?

3. Is the A600HD compatible with CD ROM?

4. As the A600 doesn't have an expansion port, are there any hand-held scanners compatible it?
Keith Martin, Leigh-on-Sea, Essex

1. Yes – but I'm not sure how I'm afraid! Anyone else know?

2. Trap door expansions on a 600 are Chip RAM, not Fast as they are on the 500. As this is better for 99% of applications and games, I'm not sure why you want Fast RAM, but I believe there are external expansions available (that plug into the PCMCIA slot?) which will give you some Fast RAM.

3. If by CD ROM, you mean the A570, then no, not at present. The 570 plugs into the expansion port, and as you've already noted, the 600 doesn't have one. It's possible that with the computer's built in IDE interface you could attach a non-Commodore drive, but then I don't know how that would affect your existing hard drive.

Commodore are rumoured to be working on a 600 compatible CD ROM drive, and a number of independent manufacturers are rumoured to be working on expansion ports. We'll just have to see what materialises...

4. Most scanners plug into the parallel printer port, so the lack of an expansion port makes no difference. I particularly like the Golden Image scanners.

OK ROCHARD?

I own an A500+ and I was wondering if the Rochard hard drive is worth while as it's so cheap, or should I continue saving for a GVP Series II. If the Rochard is OK, what size would you recommend, 40 or 60Mb? Alternatively I could buy a CD ROM which someone told me was better than a hard drive anyway.

Finally, is it worth buying an extra disk drive for my *Formula 1* game, and if so, which one?
Ian Thomson, Eaton Socon, Cambridgeshire

Well, I think everyone knows by now how I feel about GVP drives – they're the height of luxury! However, if they didn't exist, the Rochard would be my second choice. They're sleek, they can be turned off (leaving you free to use the computer without that irritating fan running all the time) and you can add extra memory to them.

CD ROM is a read-only device, which means that you can't actually store anything on them. With your hard drive you can also add up to 8Mbs of RAM. The only advantage that a CD ROM drive has is the fact that the pre-recorded disks hold up to 660Mbs worth of data each. Of course, that's irrelevant if none of the data appeals to you.

An extra floppy drive is always useful, and it will mean less disk swapping for your *Formula 1* game. My favourite is the Cumana, but the Roc Lite (also made by Roctec) is a very good alternative.

DODGY COMPUTER

I would be very grateful if you could possibly explain why my computer keeps 'half crashing'. By half crashing, I mean that the screen goes blank and nothing will work.

It all started one day when I decided to print all the documents from my brilliant collection of CU cover disks. They worked fine until I got to disk number 55.

I was in the middle of printing the documents for the Game Tamer program, when the Amiga half-reset itself. The printer kept printing the document which had been downloaded to its memory by that stage. Then the printer also stopped working. I turned off the Amiga for 30 seconds, then tried printing another document, and everything seemed to work as normal.

Please help me as it's only two months ago that I paid for my Amiga to be repaired. Is there any way that I can fix my computer?
Andrew Summers, Whitchurch, Cardiff

If the screen goes blank, and you can't use your computer anymore, that's not a 'half crash', it's just a normal full-sized version! My initial reaction is to wonder whether you're simply suffering from some sort of virus. The fact that the problems occurred after a long session in which you loaded lots of different disks, and it seemed to rectify itself after turning the power off for 30 seconds also seem to indicate this. Get yourself a decent virus checker and work through all your disks.

Of course, another possibility is the fact that your printing program is faulty (or even the docs that you're printing). I've tried printing docs which contain such bizarre control codes that both the computer and printer hang up their boots! Can you remove all control codes from the text? Can you hook your printer up to someone else's Amiga and try printing the same docs with the same program? Of course, if it's neither of these, there are always the old standbys – faulty chips, over-loaded or under-powered power supply, etc.

And then, finally, there's the question of the repair job that you just paid out for. Whilst the majority of repair companies are reputable, there are some that don't always improve the situation much. If it's only two months since it was repaired, I'd consider taking it back to them for a check up. Most companies offer a three month guarantee, so any faults should still be covered under warranty.

COPY QUESTION

Could you tell me if I can use copied games on the Amiga 600 because my friends who own A500s say I can't.
D. Raybould, Sheffield, South Yorks

It is illegal to use copied games on any computer unless they are back-ups of your own games, being used by you on your own computer.

Therefore, if by 'copied games', you actually mean games which have been 'cracked' by software hackers, then it's quite possible that the copies won't work, whereas the originals would. When these people crack games, they sometimes change the way that the games load, so that they can add egotistical messages about themselves. In doing so, they have no concern for the game's compatibility with machines other than their own.

Also, using copied games is one way of getting a virus into your computer. Not all copied games contain viruses, but these hackers are far less scrupulous than professional software companies about ensuring that the disks are safe to use.

Another reason not to use pirated games is the fact that the games are not even always complete. Sometimes graphics, sound effects, game features or even entire levels can be wiped out by amateurish attempts to circumvent a game's protection system.

Rregardless of the Amiga you're using, the only way to be sure that a game will work safely, and that everything is there, is to buy the original!

DIGITAL CONCERTS

I've been using *OctaMED* for about a year now and have been able to create some great tracks. However, I still have one major problem; I don't how to play multiple modules. You know the type of thing; music demos that play for 10 minutes at a time like the Digital Concert and Megademo disks.

I was wondering if you could tell me how they join the modules together? Is it using some form of code, or is it a program that can be bought? I already own Virus Free's Play'n'Rave, but that distorts the samples.

I've tried everything, including *OctaMED's* Multi-module function, but this limits you to having to create songs which share the same instruments.

I know how to sample so that's no problem, it's just this business of joining the modules together into one long running demo that defeats me.
Duncan Orme, Balsall Common, Coventry

To be honest, I don't know of any module player that links modules together so that they play continuously, although I seem to vaguely remember one that loaded each module whilst the previous one was playing.

I think that Digital Concert is actually coded specifically to work like this, and unless you can program I don't suppose you'll be able to learn anything by looking at the way that they've done it.

The only alternative that I can suggest is that you either activate the songs one after the other using some form of script (perhaps the start-up sequence) or that you buy one of the numerous PD programs which plays modules for you. Get hold of a catalogue from your favourite PD library to see what's available.

PD LIBRARIAN

I'm interested in setting up a PD library and I was wondering if I need to register somewhere, or if there are any fees involved? Also, where do I get the programs from?
D. Shrimpton, York

No, you don't need to register anywhere. As its name suggests, you'll be selling Public Domain software, which means that anyone has the right to distribute it without requiring the express permission of the program's authors. However, a number of PD distributors have affiliated to form various groups which aim to maintain high standards of service and software.

I will warn you that most PD companies tell me that it's getting harder and harder to survive, and many of the librarians are working 18 hours a day, seven days a week just to pay the bills. Don't expect to be welcomed by other PD companies either; the bad economic climate, combined with an increasing number of bedroom PD companies has made their lives extremely difficult.

As for getting hold of the programs, you'll have to start like most PD libraries; you buy the stuff from a library that already exists, or you copy it from someone you know. If you become established, you may find that people send you software unsolicited, but that's likely to be a good way into the future yet. It's expensive setting up a decent library, and advertising costs alone can be enough to kill your business before it starts. If you're looking for a quick buck, forget it, running a successful PD library is work, work, work, with a double helping of very hard work for afters!

ICONS IN DRAG – THE REPLY

I'd like to respond to David Walker's 'Icons in Drag' question. For nearly a year now, I've been using a program called 'My Menu'. It was on a magazine cover disk, but as it wasn't a featured program I can't tell you who wrote it. Basically, you add it to your start-up sequence and it reads an easy-to-edit script file and adds your chosen menu items to the Workbench menu. If you have a hard disk this program is brilliant. All your executable programs are just a click of the right mouse button away. I've got 38 programs (not counting the existing Workbench items) and six CLI commands under four menu headings. I can call up *Black Crypt, Maxiplan, D-Paint*, or whatever programs I choose to include. No ugly CLI or IconX windows unless the individual program calls one up.

My Menu does seem to have a couple of quirks. Firstly, I had to add Fail at 70000 to my start-up sequence before it would work, and secondly if there's a disk sitting in DF1 on boot up, the program doesn't work. My Menu plus its configuration file, occupies less memory than a single open window, so if the novelty of opening endless windows to load your software has worn off, give this programme a bash, it's excellent.
Peter Jan Kulak, North Bersted, West Sussex

Well, what better recommendation could you ask for David. Peter certainly seems smitten with this program. Although he doesn't specifically mention it, by implication I assume the program works with 1.3/1.2 Amigas.

I've just installed a similar program called AddMenu on my 2.0 Amiga (31 programs in a single menu so far!) and I must agree with Peter and say that it really is very good. It takes a little while to get used to loading everything

DIGITALLY MASTERED SAMPLES

IFF SOUND SAMPLE LIBRARIES

Each disk is compiled from a **studio quality master** and is sampled on the Amiga at **twice the sample rate** of P.D. sample disks. They are compatible with all P.D. and commercial tracker and sequencer programs. N.B. no. of samples in brackets.

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014 BASS GUITARS	: Slap, picked, fretless, FX, etc. (44)
015 ANALOG BASS	: Oberheim, Roland,Korg, etc.(22)
016 DIGITAL BASS	: Yamaha DX, Roland, Korg, etc. (28)
017 BRASS	: Sections, Saxes, Trumpets, etc. (24)
018 SYNTH BRASS	: Analog, Digital &L.A., etc. (18)
019 PIANOS	: Octave Splits, with strings,FX (16)
020 STRINGS	: Cello, Orch. Hits, Sections, etc. (21)
021 SYNTH STRINGS	: Analog & Digital (19)
022 CHOIRS	: Mixed choirs, with bells & synth (16)
023 ORGANS	: Church & Electric (17)
024 BELLS	: Real & Synth, with Choir & Strings (20)
025 SOUND FX	: Action Sounds, Explosions, Gunshots, etc. (30)

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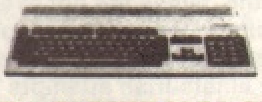
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"My palms were actually sweating as Italy surged forward"



SOCCER SUPREMO

THE WORLD CUP - THE ULTIMATE CHALLENGE

The ultimate challange in soccer management is to take a ragbag of good club players and mould them into an efficient, organised squad that will take the rest of the world apart in the World Cup Finals. Why not join Michel Platini, Johan Cruyff and Franz Beckenbauer in the USA in 94?

Soccer Supremo puts you in charge of a European national squad preparing for the European Nations Cup qualifiers. You have an initial four year contract that may be extended to six or eight years, or reduced to two, as the results dictate. You'll be expected to qualify for the Finals, then put up a show against the best European teams. but this is just preparation for the big one:The World Cup!

Customisation. The game will allow you to take the European nation of your choice and you will be allocated an initial squad of 16 players. You can introduce a further 34 players, making 50 in all, whose names and skills (but not levels) You can define yourself. These players are introduced gradually as you discover the weaknesses in your squad and also to create the balance of skills that match your style of play. The original 16 players can be defined in the same way using the EDIT program (free with the game) if you wish as well as the teams that will make up the opposition.

With Soccer Supremo the soccer management game comes of age with a match display that not only gives considerable information about the performance of players and team, not only allows the major tactical changes the state of the game demands, but is also entertaining and even exciting. The childish number juggling game has been replaced by an intelligent select-the-team and watch-the-match simulation. Oh.......yes.. Italy equalised but England won on penalties.....

3D, 22 MAN MATCH DISPLAY

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HEAD COACH V3

"From my point of view , the game has kept me sitting up at nights through holidays and weekends for up to 12 hours at a stretch, with miniscule breaks for food and other necessities...........It is a game I have no hesistation in recommending to anyone with even the slightest interest in American Football" ATARI USER

Headcoach V3 has been described as "the best game ever put onto a computer". It is the complete American Football game, a multi season epic with the very best strategic elements of the real thing. You will call the plays, devise the gameplans and develop the team.

Use the first season (2 pre-season games, 16 regular season games, and the play-offs) to discover your 45 man squad of players. Then exploit the college draft to improve the team and expand your game play to beat the very best the NFL can throw at you.

56 Screens of stats are available tohelp you to judge your players and team performances.

Players will age and teams will fade (a player will last about 6 seasons), but you will stay and rebuild....

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Head Coach works with ALL Amiga/monitors
SS and DIV 1 require colour monitor/TV.

from a menu, but it's so much nicer than having to open millions of windows to find the program you want.

A WASTE OF MONEY?

We have just purchased the Amiga 600 as a Christmas present for our children aged 12 and 8.

After much thought, we decided on the A600 as it was the latest model, but now to our HORROR we have been told by friends that it is to be discontinued, and that parts, games and other software will be unavailable.

Have we made the right choice or have we wasted our VERY hard earned money? I hope that you can help resolve our dilemma.

Pete and Paula Featherstone, Barwell, Leicester

You can just go and bop your 'friend' right on the nose for misleading you and causing all this unnecessary worry! It seems that he has mixed unsubstantiated rumours with the power of his imagination to give you this scaremongering horor story.

Of course the A600 will be discontinued... eventually, as will the 486 PC, the A4000, CD players, etc.

Commodore have only just built a factory up in Scotland to manufacture the 600, so it seems likely that they have long term plans for the machine (which has been hailed by many as the first of a new generation of Amigas).

It's true that since the release of the A600, two new Amigas have been released, but they are not really aimed at the same market, either in terms of capabilities or price.

Even if Commodore never sold another Amiga starting right this second, there are well over 3,000,000 in circulation, and the software industry is thriving. As your computer can run virtually all A500 Plus compatible software, I don't think you need to worry about limited software supplies.

The A600 is a robustly manufactured machine with a high degree of reliability. In short, it's the perfect first computer for kids such as yours. You might even find that you enjoy using it yourself, after all there's a lot of good 'serious' and business software available for it. You've made an excellent and well informed choice!

SAMPLED SPECTRUM

I have recently purchased a PD Spectrum emulator for A500+. Upon loading, it says that to load a piece of Spectrum software I need to load it via the parallel port using a sampler such as Alcotini or Omega.

Being relatively new to the world of the Amiga, I was wondering if you would be so kind as to explain what a sampler is, how to use it, how much it costs, where to purchase one from and if I will need any extra cables to connect it?

Maneesh Tandon, Mosely, Birmingham

A sampler is a device that converts an analogue sound signal into a digital one that can be replayed via the Amiga. Once a sound has been 'sampled', you can replay the sample from a music package, or with the correct software, directly from Workbench or the CLI.

Ironically, in your case, a Spectrum program is digital, which is then converted into an analogue format for storage on tape, and now you are simply converting it back! You should be able to purchase a suitable sampler for less than £40, and you will find them advertised by numerous companies in the pages of this very magazine! The two that you mention are Italian models that I don't think you'll find in Britain, but not to worry, almost any parallel port sampler will work.

Provided you still have your Spectrum tape leads you won't need to buy any more cables.

See the letter earlier in this episode of Q&A for some sampler recommendations.

WOT NO KEYPAD

I own an A600 and I find that some software won't work because of the absence of a numeric keypad. These keys serve a variety of functions (such as controlling perspective on *D-Paint 3/4*), etc.

There must be many similar programs, so I was wondering if there is any way of getting the other keys to perform a similar function to the numeric keys? Perhaps there's a special conversion program? Will companies specify in their advertising whether or not a program requires the keypad in order to work fully?

G.J.Bouser, Aylesbury, Bucks

There is a special patch for *D-Paint*, which remaps the keypad to the ordinary number keys. Contact Electronic Arts to get hold of it. I'm told that some companies have produced versions of their programs specifically for the A600, and you can usually acquire these versions as a free replacement for your existing version simply by sending your non-working version to them. I suggest you phone or write to confirm before sending your disks off.

Having said that, I think that there are very few programs (apart from *D-Paint* and most flight sims) that use the keypad, and can't use the number keys instead.

I'm certain that all new software will take account of the A600, so companies won't need to specify that their stuff is A500 compatible; it's taken as read.

INEXPERIENCED USER

I feel I must complain about your magazine's assumption that all readers are experienced operators. As a newcomer, I purchased your magazine with a view to following the *OctaMED* tutorial, but during this series I wrote in to you about my difficulty in following the instructions, not to mention the corrections.

I had no reply to my last letter, so I really don't expect a reply to this one. Anyway, I don't suppose you really care if you lose one confused reader.

James Bence, Hamilton, Strathclyde

You've raised an interesting question there James; just how basic should we make our instructions? We try to cater for all readers, and we do care very much about each and every one of you, hence this Q&A column. However, it seems that sometimes people such as yourself seem to be confused as much by the concepts being described as by the actual instructions given. As you might expect, your fellow readers range from absolute beginners such as yourself, to experts who could show us all a thing or two. We have to keep them all happy, but even so, we do aim our tutorials more towards the lower end of the scale, and we sometimes receive complaints for 'assuming that our readers are idiots' (we don't!).

I freely admit that my *OctaMED* tutorial wasn't perfect, but it was still one of the most popular tutorials we've ever run. On the one occasion that I made a mistake (yes, I'm only human) but I did my best to correct it the following month, and any reader who phoned the CU offices was given help immediately.

SOUNDTRACKER 2.6

I am having some problems getting a program to work on my A500+. I bought my Amiga to play games and make music: the games playing is going fine, but I'm having some trouble with the music side of things.

Wanting to start with a simple tracker program, I bought *Soundtracker 2.6* from a PD library. It runs OK just so long as you don't want to save any songs or modules. Songs never save, despite what the program says, and the modules save but are complete nonsense when you reload them.

I read somewhere that *Soundtracker 2.6* was Plus compatible, but both versions I've got hold of don't seem to work. Is there a real Plus compatible version that will save my songs, or is there an easy to use alternative.

Peter Hickman, Brighton

I checked out my version of *Soundtracker 2.6* and it works fine with the Plus. It loads and saves exactly as it should. Perhaps your modules were complete nonsense in the first place?! I must say though, the program's file requester has a rather frustrating and non-standard way of operating.

Anyway, mine is on disk number 2067 available from 17 Bit Software, 1st Floor Offices, 2/8 Market Street, Wakefield, West Yorkshire, WF1 1DH. Tel: 0924 366982.

Even though I'm a hardened *OctaMED* fan, I must say that the program is very good, and the two demos that are included are really great.

CORRUPT DISKS

My Amiga has gradually deteriorated until it got to the stage that I had to send it off for repair. While it was away, my mum bought herself an Amiga, and I've realised that many of my disks are corrupted, including my all time fave, *Pinball Dreams*.

Do you know of any programs which can uncorrupt disks or even remove viruses. The virus checkers I have won't do it due to the game's disk protection. Please help me!

Richard Saunders, Gawcott, Bucks

If your game used to work on your computer, but doesn't on your mum's, it may be that her drive heads are aligned differently to yours. Even if your game is dead, either due to a virus, or has simply worn out, most companies will change faulty or damaged disks. Contact the game's publishers, 21st Century Entertainment at 56B Milton Park, Abingdon, Oxfordshire, OX14 4RX. Tel: 0235 832939.

NEXT MONTH

I must leave you for another month as I toddle off into the sunset. If you have a problem, or you want to share your vast knowledge with everyone else, or you simply want to comment on a letter in these pages, please send your letters to me Mat Broomfield at: Q&A, CU Amiga, Priory Court, 30-32 Farringdon Lane, London, EC1R 3AU.

Sample CDs can breathe new life into your tired old sampler. Tony Horgan cocks an ear to some of the best new releases.

CD SAMPLES REVIEWS

FUNK GUITAR

TIME AND SPACE, PO BOX 306, HERTS, HP4 3EP. TEL: 0442 870681.



When the sample CD thing kicked off about 18 months ago, most of the material on the discs was taken from recent dance records. Although copyright problems weren't much of an issue, contrary to the sales blurb, you were actually using sounds from last year's records. Funk Guitar is one of the first of a new wave of original sample collections, comprised of sounds composed and recorded specifically for the sample CD market.

A whole disc of rhythm guitar loops might seem a bit over the top, especially when you see that they've all been created by one man and his guitar. Surely they all sound the same? Not at all: Vlad Naslas has worked wonders, offering 79 minutes of irresistibly catchy, toe-tappin' loops, ranging from early James Brown to styles that haven't even been invented yet!

It begins with a massive rare groove section, opening with some familiar 'wakka-wakka' rhythms, mostly two and four bar loops at around 100bpm to begin with. Sticking with the 60s funk style for the next 30 minutes or so, the tempos range from 81-128bpm, and include re-played versions of a few classics, along with heaps of original stuff.

Into the Funk'N'Fusion section, and memories of Starsky and Hutch come flooding back. This is 70s disco in a nutshell. It's hard to believe this lot hasn't come straight from the days of afros and flares – only the crackle-free recording gives it away. The car-chase music continues through the selection of Crisp and Dry riffs, which give way to some screeching, distorted heavy rock guitar loops, ranging from 91-128bpm. After a bout of grungy metal noise, come the SFX, Talk Box and Vocoder tracks.

Somehow Mr Naslas has managed to get techno sounds from his six-string. With the help of some meaty distortion, phase and rhythm gating effects, he's served up a double portion of pulsating riffs that are just begging to be put over a thumping dance beat. He's even got the guitar to sound like a TB 303 acid bassline synth!

Riffs from this CD are going to crop up on countless chart and club hits, and probably will have done already by the time you read this.

RATING: ★★★★

NOW THAT'S WHAT I CALL SAMPLING

AMG, HURST LANE, PRIVETT, NR ALTON, HANTS, GU34 3PL. TEL: 077088 383.

Not content with sampling every dance record ever made, AMG have 'sampled' the Now That's What I Call Music name – cheeky devils! Now Sampling is given away free with any order from AMG, acting as an advert for their HitSound Producer series of CDs, as well as being a handy sample collection in its own right.

The list of contributors includes Cold Cut, Norman Cook (Beats International and Housemartins), and JJ Jeczalik from The Art of Noise, alongside some lower-profile producers such as Pascal Gabriel and Pete Gleadall. Each of the producers has supplied a short selection of samples, none of which are included on their own CDs.

Highlights include Cold Cut's offering of alternative loops, vocals and effects. Norman Cook's corner is mostly filled with laid-back rare groove drum loops, heavy on the crackle. You also get the 'Hmm-hmm' bit from Dub Be Good To Me – not much use as it is, but chop it into a different order and it could come in handy. Bongo and conga loops seem to be popular among most of the producers. In general, you get a small selection of breaks, stabs, vocals and effects in each section.



Now Sampling isn't the most happening collection of samples around – there wasn't a sample that instantly made me think 'Wow, I've got to put that one in the collection'. A good set of bread and butter samples all the same.

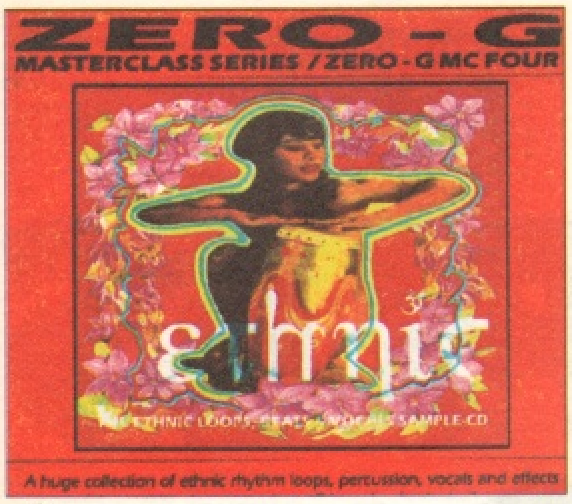
RATING: ★★

ETHNIC

TIME AND SPACE, PO BOX 306, HERTS, HP4 3EP. TEL: 0442 870681.

World Music was threatening to become The Next Big Thing, but so far it's only made it big on the back of established artists like Sting and Paul Simon. However, under the new guise of ethnic music, it's now discretely slipping itself into the dance music scene. Who better than sample experts Time and Space to bring out the first dedicated Ethnic sample CD?

Snareless drums and shakers abound in the opening selection of Afro Latin drum loops. To begin with, you get eight slightly varied bars of each break, followed by another two. Later on, the eight bars are reduced to six, and then four. As for the quality of the loops, they're well recorded, and could sit quite happily behind a standard house beat. Straight 4/4 timing is the rule in general.



After a while the ethnic beats give way to some more standard house breaks, taking in some mouth-harps, flutes and violins along the way. A collection of 17 breakbeat fills precedes the Eastern rhythm section, which is followed by separate percussion sounds. A generous load of samba-style brass riffs are next, followed by a bit of twangy 'Rawhide' guitar and miscellaneous other effects.

There are some wails and chants sprinkled around the disc, but a few more would have been appreciated. Incidentally, one of the vocals was used to good effect on Bomb The Bass's Winter In July, but it sounds pretty naff on its own. It just shows how different something can sound out of context. So, apart from the lack of tribal vocals, there's still easily enough drum loops to keep any Ethno-head going for ages. Anyone involved in soundtracks for TV, films or games would do well to check it out.

RATING: ★★★

WHAT'S NEXT!

TIME AND SPACE, P.O. BOX 306, HERTS, HP3 3EP. TEL: 0442 870681.



This one's along the lines of AMG's Now That's What I Call Sampling, but where the AMG disk fails to excite, What's Next! will have you sampling into the small hours. Given away free with any order of £49.95 or more, What's Next! compiles elements of Time and Space's ever-expanding range of dance sample CDs.

It begins with sounds from Datafiles 1-3. Breaks, vocals, effects, drum sounds, basses and one-shot instrument samples are all here, suitable for use right across the dance music spectrum. Excerpts from the slightly more experimental and original X-Static Goldmine are next, with a wide variety of in-yer-face samples.

Now it's the turn of XL-1 to present itself. From the compilers of the X-Static Goldmine, this takes a different approach to the sample CD. We get 6 of the 64 short demo tunes from the forthcoming disc, which are followed by the samples used to create them. The idea is that you hear the samples in a musical context, and so have a better idea of how they'll sound in practice. It seems to work well, and there are some pretty tasty loops to be lifted just from this small portion.

The Funky Element is up next, with crunchy hip hop and soul breaks, along with a few horn stabs. Watch for a full review of this next month. Whale songs and pulsating washes get a look in on the Ambient section.

Selections from the Funk Guitar and Ethnic CDs are next, before the Paul Hardcastle taster.

I'd expected a rather out of touch set here, and the Alexander O'Neal-style demo track didn't bode well, but there are some killer techno rhythm loops tucked between the more usual stuff. Can't wait for the full CD when it's released.

A token 20 samples from Electribe 101 mark the start of a series of demo tunes, created with samples from the forthcoming Voice Spectral vocal CD among others. What's Next! is a very impressive collection of samples – as good as any other I've come across. There's plenty of variety, and the quality is excellent throughout. And remember, it's free with any order worth £49.95!

RATING: ★★★★★

AMBIENT

TIME AND SPACE, P.O. BOX 306, HERTS, HP4 3EP. TEL: 0442 870681.



Okay, let's get this over with right now. The Orb. There, I've said it. Now can we get on with this review with no further mention of them?

Ambient music is another style that's tipped to be The Next Big Thing, although at the time of writing, the aforementioned band is the only one to have had any substantial success in this area. Combining the hypnotic charms of Jarre, Floyd, Tangerine Dream and so on with current dance trends, ambient is designed to mellow you out with relaxing washes, laid back rhythms and strange sound effects. The Ambient CD aims to give you all the sounds you need to create your own mind-warp experiences.

A lot of the best chill-out tunes are composed with old analogue synths, with loads of spacey sound effects riding over the music. Not surprising then, that the CD starts off with a selection of Star Trek-style warbles and wooshes. Most of these can be looped, whether they're background drones or rhythms. Unlike vocals or drum loops, you can get away with sampling these at quite low rates, so long as you filter out the top end, to get rid of the inherent ringing overtone.

More synth-created sounds take us up to track 22. These include some raw synthetic waves, such as triangle and sawtooth loops, which could be used to synthesise your own sounds if you've got the hang of *MED's* Synth/Hybrid features (and if you have, would you mind enlightening me on the matter?).

Now it all starts to get rather ethnic, with drums and shakers from various parts of the world. Yet more assorted synth effects and atmospheres work their way between the percussion, before real-world sound effects get a look in.

To get the most out of these sounds, you need to have enough memory free for some really long samples. However, if you're recording your music to tape, rather than writing for a game or a demo, with the help of a mixer, sounds can be 'spun in' directly from the CD in the true spirit of ambient jamming. With deft use of the fast-forward and rewind buttons on the CD player, you can throw in any sound that takes your fancy, as you record the main tune from the computer. This Ambient CD is definitely a grower, capable of adding some real depth to your spookier tunes.

RATING: ★★★★

FUNKY ELEMENT

TIME AND SPACE, P.O. BOX 306, HERTS, HP3 3EP. TEL: 0442 870681.

Not to be confused with the Funk Guitar CD, The Funky Element is a more varied collection of sounds, geared towards funk, hip hop and rap. Most of the material has been recorded especially for the CD.

A series of 120 'vinyl style' drum loops are first up. The idea is that they sound like they've come from crackly old soul records. All the beats have been played on the same drum kit. As a result, they all sound very similar. An enormous section of horn stabs is next – 192 in all! After that lot, there's the sax department. The collection of 96 saxophone hits, effects and riffs are rather more useful than the horn section. Most of them would be best used in a hip hop vein, thrown in at the end of a slow two or four bar break. Guitar riffs and effects follows. Most of these are tasty little rhythm guitar loops, ranging from old funk to disco. Like the sax section, some are too short for looping, but could be used as drop-ins, or stuttered to form hooks. After about 60 of these, there's a healthy supply of one-shot snares, followed by some old-style bass drums. After a few high hat samples, there's a bout of mixed percussion.

Half the fun of using breakbeats, is the way you can grab a whole new flavour, just by putting a different loop in the backing. With The Funky Element, this doesn't apply, because the flavour is pretty much the same throughout all the breaks. Even so, if you're frustrated by the limited rap and hip hop sections on most dance sample CDs, you'll find enough in The Funky Element to get you well into that drum and bass groove.

RATING: ★★★

TONE'S TIP

**Tone's tip for this month is...
Add instant credibility to your tracks, by putting a finger-snap sample on every other bass drum beat, using a basic disco-style kick, high hat and snare pattern.**

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CU 02/93



Going global is the dream of many bulletin board users. Ian Moran takes a look at one network that makes the dream become a reality.

GLOBAL MAIL

WHAT IS FIDONET?

Fidonet was formed in 1984 by American Tom Jennings as a means of transferring mail & files to local computers at night when telephone costs are low. Log onto any Bulletin Board nowadays and chances are it will be part of the worldwide Fidonet network of which there are now some 21000 members. Fidonet is run by a dedicated bunch of system operators or 'sysops' and exists as a means of sharing files and information concerning a wide variety of subjects, mainly of a computing nature. News on Fidonet appears often weeks in advance of that in the monthly computer magazines. In addition, users on Fidonet can download the latest PD software months before it becomes available on magazine coverdisks or in PD libraries. Most makes of popular home computer are supported with particular emphasis on the Amiga and PC range. Computers on this network, known as 'nodes', exchange mail and files using Fidonet compatible 'mailer' software. Using a 'store and forward' system mail packets are bundled and compressed prior to transfer to other sites, usually during the early hours of the morning (so called Zone Mail Hour – ZMH). By transferring mail in this way between nodes on the network, it is eventually propagated throughout Fidonet.

FIDONET MAIL

Two types of mail are carried on Fidonet, distinguished by who has access to it. 'Echo Mail' is mail which is available for all to read (like a newspaper) and consists of named groups set aside to discuss a particular area of interest. 'Netmail' is private mail (like a letter), which can only be read by the person sending/receiving it (and the sysops of the boards the mail travels through!). Sending netmail in this fashion can be slow, since unless some kind sysop calls the recipients board directly, the mail will travel via normal Fidonet means, eventually arriving at its destination after passing through several boards on the way. With additional software you, the sender, can deliver the mail directly yourself (see later).

Each echo is distinguished by its 'tag name', the name the echo is known by throughout the network. There are many Amiga-specific echos, some international in distribution, such as AMIGA, others more national in flavour, e.g. AMIGA_UK. As well as general Amiga related areas, echoes exist to discuss more specialist areas, such as AMIGA_PROG for programming and COMMS for general comms issues. Each of these areas will have someone responsible for keeping an eye on what goes on. This person, known as the moderator, will ensure that discussions are within guidelines defined by a set of echo rules drawn up by the creators of that echo.

ACCESSING FIDONET

So how do you find out if Fidonet is for you? There are basically three ways to access Fidonet mail areas without actually becoming a node yourself. The first and most expensive involves calling the BBS directly using your favourite comms program, e.g. TERM2.4 or NCOMM2. Once logged on to the BBS and having negotiated its menu system, you locate and enter the area of interest. Once there, mail can be read/replied to etc. while on-line. Unless you are using a local board, handling Fidonet mail in this fashion quickly becomes expensive. It will however help you to determine whether or not Fidonet is worth further investigation.

Normally, the next port of call for would-be Fidonetters is the use of an Offline Reader (OLR). This software allows you to prepare mail off-line, rather than run up a large phone bill. It will allow you to specify your favourite editor for preparing mail, archiver for compressing it and specific disk locations for inbound and outbound mail bundles. Any mail you prepare will be processed into a packet compatible with the mail software on the called BBS.

The next time you call the board your compressed mail bundle will be uploaded and processed by the BBS software. During the same session any new mail in the areas you have subscribed to will be available for download as a compressed packet. Handling mail in this way greatly reduces the time spent on line. However, unless you are prepared to write scripts in, e.g. Ncomm, to negotiate the BBS menus, you will still have to manually call the BBS every time you wish to handle mail.

Mail software on the BBS or 'doors' as they are known, support several formats of mail packets the most common being the QWK format. If the BBS you call uses the QWK format then you must use a QWK compatible reader. Probably the two most popular QWK readers at the moment are AQUICK2.1 and QBLUE, both widely available for download on many BBS. Both packages and indeed any OLR will require a certain amount of configuration before use. This usually involves the creation of configuration files which tell the program what editor and archiver to use, as well as where to locate your mail bundles and where to put them for uploading to the BBS during the next call.

FIDONET POINTS

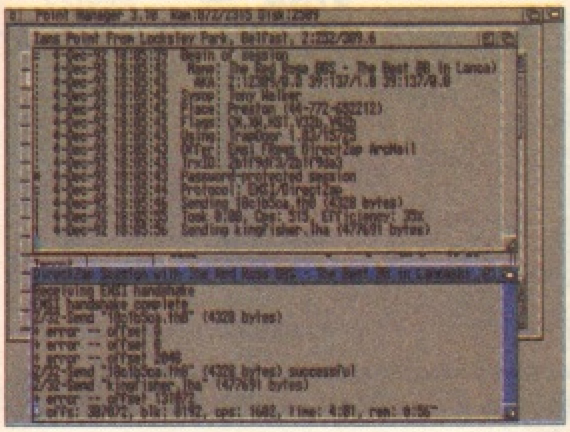
OLRs do not allow a 'message base' to be built up on disk, i.e. a database of stored messages. They merely provide a snapshot of mail available at the time you call the board. Also, you have to make that call yourself. Wouldn't it be better if the computer automatically called the board, transferred the files and prepared them for reading without your intervention, even when you are asleep?

This is precisely what you can achieve by setting up a Fidonet Point. A Point is an address assigned to your computer known only to the Fidonet node you call. You make an arrangement with the sysop of your local Fidonet node to become a point off his Fidonet address (see box). He becomes known as your 'boss' and is responsible for routing all files to your computer. It's as if you and your boss have set up a small two machine network, except your boss is also connected to the rest of Fidonet, and so therefore, indirectly, are you. This allows someone on the far side of the globe to send netmail or files to you, either by allowing them to hop around the network until they eventually reach you, or by 'crashing' them directly to your boss node (cutting out the middle men). Since you are known to your boss, these files will be waiting for you the next time you call. Conversely, you can send netmail directly to another user by calling his boss node directly, or you may choose to have non-urgent netmail filter through Fidonet. But the big prize is that you now have the ability to request the latest PD files from nodes across the network the same day they are released!

> ### FIDONET ADDRESSING
>
> Fidonet address's are composed of five parts
>
> Zone:Net/Node.Point@Domain
>
> The Zone portion describes a particular world region, e.g. 2 is Europe, while 1 is North America. Within each Zone, Net describes a distinct geographic region, while within the Net, Node describes a single computer running FidoNet software. A Point's address is formed from the Boss node address, e.g. 2:252/309.6, is point 6 off 2:252/309. The Domain portion is not as yet universally supported and should not be used.

POINT SOFTWARE

All this functionality comes at a price. Point software can be tricky to set up, and although you can run a system using floppies, you will soon be pricing hard drives in the magazines! You need essentially two pieces of software to set up an Amiga Point. Firstly, a Fidonet compatible mailer, whose sole purpose is to contact your boss node and upload/download mail packets. Secondly, some means of managing these mail packets, as well as the message base which begins to take over your disk! The most popular mailer for Amiga users at the moment is TRAPDOOR, a superb program produced by a group of chaps calling themselves Trapdoor Development, based in Vienna. Trapdoor (currently at version1.83) is shareware and will cost you just £21 to rid yourself of guilt, not to mention those annoying requesters posted on program start-up and shut down. A second package, Welmat, is currently undergoing

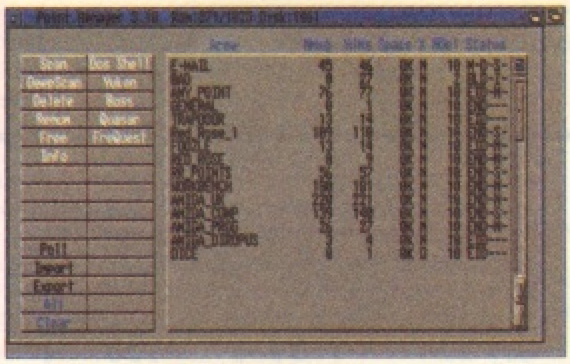


The Fidonet mailer. Trapdoor in action calling The Red Rose BBS in Preston. The upper window is written to a log file on disk, the lower window displays the conversation between the two Fidonet mailers.

development and promises to give Trapdoor some stiff competition in the area of available Amiga Fidonet mailers.

POINT MANAGER, FOOZLE & APRIL

In addition to a mailer, you will also need some means of extracting, storing and reading messages contained in Fidonet packets, not to mention some means of maintaining the message base. Such programs go under various names, including editors, tosser/scanners. There are currently three

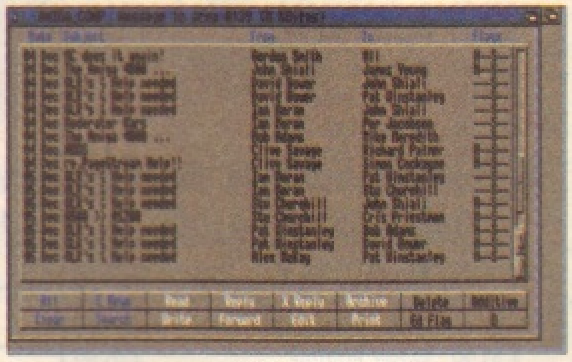


Once mail packets have been downloaded using Trapdoor, Point Manager is used to import these packets into the message base. Point Manager initially displays the AREAS window, a list of currently available echo mail areas for this point.

popular Point packages on the Amiga, Point Manager 3.10, Foozle 1.02 and the newcomer April (0.991), still in beta test stage. All three are excellent choices for Amiga point software and the reader is urged to try them all and stick with the one he/she prefers. Again, all three packages are shareware and well worth registering. When used in conjunction with Trapdoor they provide a point user with all he needs to use Fidonet to the full.

USING THE SOFTWARE

Point software is used as follows. Messages are prepared off-line using a package such as Point Manager and exported to your out-bound directory prior to calling your boss. This is known as polling, and with the correct software, may be automated, requiring no intervention from yourself. Echo mail will be compressed to reduce transmission time, but netmail usually isn't. This is because your boss, who receives all your echomail, will know the archiver you use, this having been agreed previously. However, since you can choose to crash netmail directly to the recipient, you can't guarantee the receiving node will be capable of un-archiving your packet since he will not know the program used to create the archive in the first place. During the next poll, packets in your outbound directory will be sent by Trapdoor to your boss node. In turn your boss will have prepared any mail for you by exporting mail to his outbound directory for your point. Thus, an exchange of Fidonet mail will occur. When the poll is finished and Trapdoor has dropped the line, running 'import' will unbatch and toss the messages into your message base. At this stage the messages can be read and new ones entered by using your chosen text editor. All three programs, using an

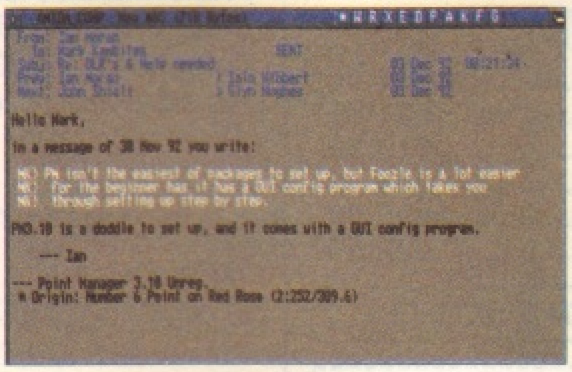


Double clicking on an Area will display the MESSAGES window. Here the date, subject and author of the article can be seen. Two rows of gadgets are used to manipulate currently selected messages. All new messages can be selected by clicking the 'S News' gadget, followed by the 'Read' gadget.

external program menu, allow the user to bolt on extra or enhanced functionality in the form of other software packages and, indeed, the first thing you should do is add the capability of running Trapdoor from within the point software. This gives a truly integrated environment easily tailored to your needs.

FILE TRANSFER

Point packages also allow file requests or 'frequests' from nodes on the network. To obtain a file from any node permitting file requests you create a file request packet containing the name of the desired file. Uploading this file to the node will result in the download of the chosen software. The beauty of this is that you don't need to know where the file is located on the BBS – software on the node sorts this out for you. In addition, many nodes support the use of 'magic' names. This allows you to request the latest version of a program by simply knowing its magic name. For example, requesting TRAPDOOR on many boards will always get you the latest version of this software. But what if you don't know the phone number or indeed comms capability of the board you are calling? This is where the 'nodelist' is



Double clicking on a message in the MESSAGES window displays that article in the BROWSE window. A row of gadgets in the upper window border permit manipulation of the displayed message.

essential. The nodelist is a text file, updated weekly, containing a record for every node in Fidonet including details such as phone number, modem speeds supported, Fidonet address, sysop name, etc. Trapdoor will use this file to find the phone number of the node address you are calling. For example, running Trapdoor as follows: 'Trapdoor call 2:252/309' places a call to the Red Rose BBS in Preston. The phone number will come from the nodelist. With new nodes being added to Fidonet daily the nodelist quickly becomes out of date. Rather than download a new nodelist (approx 1.6Mb in size) it is possible to apply smaller files known as nodediffs to the main file thus bringing it up to date. For those short of disk space, regional nodelists are available.

AREAFIX

Finally, using a facility known as 'areafix', it is possible to add/remove yourself from echos automatically without pestering your sysop to do this for you.

IS IT ALL WORTH IT?

The added complexity involved in setting up a point is more than compensated for by the sheer usefulness of the system as well as the significant savings in reduced telephone charges. You will have a constantly changing message base on disk and will be in a position to request files the instant they are advertised on the network. The amount of information you can gather about the Amiga is phenomenal. The only problem is finding the time to read it all, so be prepared for some very late nights!

IS THERE ANYBODY OUT THERE?

We've got together a brief list of some of the Boards out there. If you run a Board and would like to see it appear in these pages, drop us a line at the usual address.

Name: NEEDFUL THINGS
Max BAUD: 14400 (V32BIS)
Tel No: 44-(0)495-245151
SysOp: ANDREW PICK
Hours: 24 HOUR SYSTEM
Modem: MIRACOM COURIER DS+
Networks: FIDO 2:253/601 AMIGANET 39:136/10

Name: CONCERTO
Max BAUD: 2400
Tel No: 0246 214680
SysOp: MARTIN RADCLIFFE
Hours: 24 HOUR SYSTEM
Modem: MIRACOM WS3000
Networks: NONE

Name: ANDROMEDA
Max BAUD: 14400 (V32BIS)
Tel No: 0873-858921
SysOp: ANDY WILSON (WIZ)
Hours: 24 HOUR SYSTEM
Modem: SUPRAV32 (V32BIS LINE2)
Networks: 2:255/171 39:136/1

Name: DARK SOLUTION
Max BAUD: 1200
Tel No: (0246) 410-487
SysOp: ANDY MILLER
Hours: 10:00 P.M – 8:00 A.M
Modem: RS DUO SB2123D
Networks: NONE

Name: FOREVER AMIGA
Max BAUD: 14400 (V32BIS)
Tel No: 44-(0)763-244591
SysOp: MICHAEL STANDING
Hours: 17:30-06:30 + 24HRS WEEKENDS
Modem: SUPRAFAX V32BIS
Networks: NONE

WHERE AM I?

Ian can be contacted at the following e-mail addresses

Internet	imoran@cix.compulink.co.uk
	ianm@icsbelf.co.uk
FidoNet	2:252/309.6

CLUB CALL

CU Amiga presents its monthly profile the best Amiga clubs. Wading his way through the rivers of letters around his desk, Steve Prizeman returns to assess the best from the rest.

AMIGAHOLICS

29 Wolfe Crescent, Charlton, London SE7 8TS.

Edited by Kevin Bryan, this is an on-disk magazine, which provides both utilities and lighter items for its readers, is presented with a sense of humour. On the practical side of things there is serious information which dedicated Amiga-users should find seriously useful. The last edition I saw (first issued October last year) carried an extensive tutorial for the Datel Electronics Action Replay Freezer Cartridge (Mk II version). More is set to follow in the next disk mag. There are also extremely thorough, on-going, guides to programming in *AMOS* (including a special section for the absolute beginner to programming), and C. There is also a script for ARexx, which automatically unarchives files and checks them for viruses.

The program Auto-Disk_WB2.x was also included, enabling the creation of a bootable disk. Ultraplay by Paul Kent, a PD program which facilitates the playing of some music composed on the Amiga, is featured, together with a couple of tunes. An art gallery section displays readers' pictures, and includes a couple of short animations. One of the paintings appearing there is a lovingly recreated view of an Amiga – but *why*? The animations are light-hearted, but if any proof were needed that the producers of the mag can be practical jokers at times, watch out for what happens to your cursor in one menu if you trustingly click where instructed (the effects were purely temporary, thankfully)!



Feline grace? A colourful Tom fills this lively picture from the Amigaholics' art gallery.

AMIGA SPECIAL!

Honeysuckle Cottage, 71 Green Lane, Studley, Warwickshire B80 7EY.

Selling public domain software and commercial products, and offering a printing service to members, is this industrious club. For a yearly fee of £5, members will receive a monthly newsletter detailing the new hardware, software, and PD available to them at club prices.

Commercial products available through the club include *Deluxe Paint 4* (£79.99), *Mini Office* (£79.99), drawing and word processing packages, various hard drives with SCSI controllers, and more (prices include postage and packing). Amongst the PD disks currently available are the Amiga Fox Desktop Publisher, Assassins Label and Databases, and the Text Engine 3 word processor. All PD disks are offered at 75p each.

Amiga Special! will print members' documents for £1 per A4 sheet (Including P&P). All they need to do is send the club the text, either on-disk as a file created on an Amiga word processor, or hand written. For further details of these and other services contact Andrew Stanford at the above address.

AMIGA USERS GROUP

25 Glen Eldon Road, Lytham St Annes, Lancashire FY8 2AX.

The most recent newsdisk from this club to cross my desk, and, more importantly, to be popped into my Amiga, contains a large amount of information and programs of use to its members.

With 11 programs featured on the disk, all from the Fred Fish range, including Model4D, Super File Manager, and Spread (an Amiga spreadsheet), there's no doubting its dedication to providing utilities for the readership. Programming tips and listings are also provided, as is help with software and hardware – the Amiga Users Group does, in fact, provide a telephone advice line for its members to help with soft and hardware problems, as well as to provide buying advice.

Soft and hardware reviews, a listing of the PD software available to members, and club news (such as hopes to organise workshops on programming and using your Amiga for business, details of trips to computer fairs and exhibitions) are also included. Articles are invited for the newsdisk, on any subject relevant to computing.

For Amiga-owners living in the Fylde area, membership of the AUGF costs £15 per annum, including a subscription to the newsdisk. For an additional fee, access may be gained to the club's own bulletin boards: Red Rose, and Enterprise Information Systems (EIS).

AMIGA UTD.

14 Linden Close, Hutton Rudby, Yarm, Cleveland TS15 0HX.

With about 60 members so far, AmigaUtd. is growing constantly. The club publishes a disk mag every month, featuring reviews, games, utilities, and anything else they can fit on the disk. In some months an extra magazine is produced, printed on paper of all things – how conventional! A helpline has already been established, and a bulletin board should be set up in the near future, allowing the playing of modem-linked games. AmigaUtd. has an extensive library of both serious programs and games, available for borrowing. A PD library is also planned. Advice on the best buys is provided, and hardware may be purchased through the club.

For further details about AmigaUtd, and its membership fee, send a stamped, self-addressed envelope to the editor, David Collingwood.

©AMOSTECA

Rua Cidade de Roma, 3, 3 DTº, 2735 Cacem, Portugal.

This club, a library for registered *AMOS*-users in Portugal, is now seeking to extend its membership of approximately 30 by inviting people from other countries to join. If an international exchange of ideas about *AMOS* appeals to you, feel free to contact ©Amosteca at the above address. Send enquiries to 'Death Angel'!

CITY-CENTRE AMIGA CLUB

Loughtown Lower, Newcastle, Co. Dublin, Republic of Ireland.

Founded about nine months ago by three Amiga-owning friends, the club has already acquired a membership of about 60 regulars – and many more occasional visitors.

Providing a place for Amiga owners to meet people with the same interests, whether those are games, utilities, music, or graphics, the club welcomes everyone. Whilst membership itself is free, attending members are obliged to pay £3 to finance the rental of a room in the Ormonde Hotel each week. If you want to find out more about City-Centre Amiga Club, contact Sean Corrigan at the above address.

GAMER-LINK!

28 Churchfield, Ware, Herts. SG12 0EP.

A pen-pal club for gamers, run by gamers. This group will put you in touch with fellow computer game players around the world. Gamer-Link! offers a free swap service, a free tips and cheats library packed with vital information on most games, ready to help you out when you get stuck, and a list of contacts. Getting your hands on a membership card, valid for life, costs just £5.

The club is also hoping to establish Gamer-Link News, containing up-to-date information on all the latest games, arranged with a separate version for each format, so that no one need waste time wading through irrelevant news and reviews. Gamer-Link! is looking for members interested in contributing to the news and seeing their efforts in print. Full details and a membership form are available by sending a stamped, addressed envelope to the above address.

LUNCHTIME (AMIGA)

203 London Road, Chesterton, Newcastle, Staffordshire.

This is undoubtedly one of the weirdest disk mags around. To get an idea of its style, here's how the

LET YOUR FINGERS DO THE WALKING...

A handy round-up of the many clubs already feature in Club Call. If you haven't already contacted one why not take another look and see which of these is your local.

- AMIGAMANIA, 88 Blackbull Road, Folkestone, Kent CT19 5QX. Contact: Dave Cryer. Tel: 0304 375311.
- AMIGA ATHENS CLUB, 9 Derfeld Road, Patisia 11144, Athens, Greece. Contact: Stefanos Papamichael.
- AMIGA C CLUB, Tulevagen 22, 181 41 LIDINGO, Sweden. Contact: Anders Bjerin.
- AMIGA 500+ CLUB, 3 Islay Court, Irvine, Ayrshire KA11 4JQ.
- AMIGA NETWORK INTERNATIONAL, 434 Denby Dale Road East, Wakefield, West Yorkshire WF4 3AE. Contact: Philip Turnbull.
- AMIGA USERS KLUB (BODMIN), 1 Windsor House, 19 Castle Street, Bodmin PL31 2DX.
- AMIGA VIDEO PRODUCERS GROUP, 8 Rochford Close, Grange Park, Swindon, Wiltshire SN5 6AB.
- AMOS PROGRAMMERS CLUB, 6 Brassey Avenue, Broadstairs, Thanet, Kent CT10 2DS.
- AMOS PROGRAMMERS' EXCHANGE, 7 Majestic Road, Hatch Warren, Basingstoke, Hampshire RG22 4XD.
- BATTY'S PD CLUB, 7 Denmark Road, Northampton NNI 5QR. Contact: Ian and Lynn Battison. Tel: 0604 22456.
- CDTV USERS ASSOCIATION, 113 Fouracres Road, Newall Green, Manchester M23 8ES. Contact: Julian T. Lavanini.
- CHIC COMPUTER CLUB, PO Box 121, Gerrards Cross, Buckinghamshire SL9 9JP. Contact: Steve Winter Tel: 0753 884473.
- COMMODORE AMIGA USERS GROUP, 85 Highfields Road, Witham, Essex CM8 1LW.
- COMP-U-PAL, C/Q MBA, PO Box 29, Knoxfield 3180, Australia.
- DARLINGTON COMMODORE USERS CLUB, 1 Ruby Street, Darlington DL3 0EN.
- EXETER 16 BIT USER GROUP, 25A Gloucester Road, Exwick, Exeter EX4 2EF. Contact: Andrew Deeley. Tel: 0392 72889.
- GIBRALTAR AMIGA USERS CLUB, 7 Lime Tree Lodge, Montagu Gardens, Gibraltar. Contact: Paul Jennings.
- THE GURU MASTERS, 111 Sherborne Road, Bushbury, Wolverhampton WV10 9EU. Contact: 'The Sheriff'.
- THE HARLEQUIN GROUP & MACCLESFIELD COMPUTER GROUP, 36 Stapleton Road, Macclesfield, Cheshire SK10 3NP. Tel: 0625 429667.
- HEREFORD AMIGA GROUP, Alma Cottage, Allensmore, Hereford HR2 9AT.
- IN TOUCH AMIGA, 65 Meadowside, Lingfield, Surrey RH7 6BY. Contact: Pete Allan. Tel: 0342 835530.
- INDEPENDENT COMMODORE PRODUCTS USERS GROUP, P.O. Box 1309, London, N3 2UT. Contact: Jack Cohen. Tel: 081 346 0050.
- THE KENT YOUTH COMPUTER GROUP, The North Youth Centre, Essellar Road, Ashford, Kent.
- MEGAMIGAMANIACS, PO Box 37216, Chempet 7442, Cape Town, Republic of South Africa. Contact: Nick Oliver.
- NORTHERN IRELAND AMIGA USER GROUP, 98 Crebilly Road, Ballymena, County Antrim BT42 4DS.
- NMH (NORWICH MASKED HEROES), 22 Russell Avenue, Spixworth, Norwich, Norfolk NR10 3RY.

editor describes the production process: 'Presided over by a stuffed dog called Dr Doggie PhD (C. Eng.) and a cute hamster called Harvey, the Lunchtime proles carve out their little works with a verve never before known on a disk mag. Each issue takes around seven to eight months to complete, and it probably shows. In this issue [No. III.] there is 250k of music, 120k of text, and God only knows how much space is taken up by graphics. Loads I expect.' Get the picture!

As the above information suggests, a lot of effort has gone into the appearance of Lunchtime III – entitled 'Edward's Revenge!' for no adequately explained reason. The graphics are entertaining, the 'page-turning' controls are arranged in a user-friendly fashion, putting all sections of the magazine within easy reach. The music is also quite striking in places (especially during the intro sequence), and never becomes unbearable.

The tone of the content is mostly humorous (and mostly harmless), and is best described as adolescent – which isn't to say that I didn't find some of it quite funny. I might have been tempted to call it childish, although some of the jokes make it unsuitable for small children – various condom references, for example. Conrad Truss's interview of Patrick Moore and God, 'The Secret Diary of J.R. Hartley', and details of the Secret Hamster Society, give an idea of what to expect. The Doggie/Hamster team also feature in an amusingly illustrated account of their adventures. There are also more serious items, such as story entitled 'The Thirteenth Man on the Moon', and a (rather poignant) poem about a hamster. In addition, there is an article on creating atmosphere in role-playing games (RPGs), and a guide to the Star Trek RPG.

As Freeware, Lunchtime is distributed to several PD houses: Virus Free PD, Strictly PD, and Goldstar PD. If requesting a copy, please bear in mind that an Archimedes version of Lunchtime is also produced, so make it clear you want the Amiga one. It's certainly worth taking a look at.



Ending with a bang rather than a whimper is Lunchtime III's account of the adventures of Doggie and Harvey. Note the handy page and menu controls placed alongside the story-displaying screen.

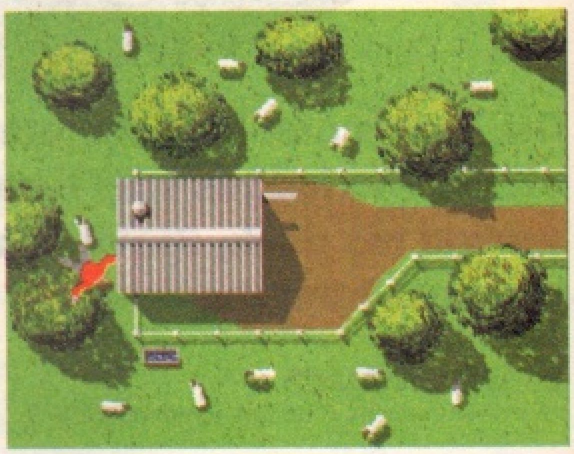
TOTALLY AMIGA

8 Cranleigh Place, Whitley Bay, Tyne and Wear NE25 9UD.

Providing both games and utilities in good measure, this new disk mag certainly gives good value for money. Costing £3.50, Totally Amiga comes on no less than three (Yes, three!) disks, offering all you would expect from a disk magazine – only more of it.

With clear and colourful screens, the presentation is excellent, making good use of icons (drawn using *Deluxe Paint 4* on a 1Mb A500) to guide the reader through the items available. Several pieces of music are included ('Defeat the Beat' by Red Sector, and two PD tunes – 'Back from the Blue' and 'Slappy'.) and once playing they may be left to run in the background, if you like music while you read.

With regard to utilities, about ten are included, amongst which are ProTracker v2.2, SnoopDos v1.5, PowerBoot v2.0, and DirWork v1.61. On the games front, two are featured. Ball involves the destruction of a wall by bouncing a ball against it, whilst Parachute Joust provides an interesting



Overhead and over a shed – the unlucky freefalling feller isn't going to find a soft landing in this famyard.

challenge for one or two players. Two downwardly-mobile would-be parachutists wrestle for the only 'chute available as they plummet toward the ground – and, my, isn't it approaching fast! This game is fun, no push-over (although you get pushed out of an aircraft to start with), and has an amusing end-sequence.

In terms of editorial text, Totally Amiga has a fairly standard range of features: reviews of music and hardware, and a coparative review of three PD virus killers, game-playing hints and tips, and news relating to the Amiga. The chief article is on the theme 'What is the future of the Amiga?', a subject which has also strained the minds of us here at CU, and exercised those of our readers – as many letters to Backchat testify. Details are also provided of Totally Amiga's special offer – compilation disks of utilities, music, and games for £1 each.

Subsequent issues, which will be published approximately bi-monthly, depending on the availability of suitable material, may feature competitions, art and animations, digitised colour pictures, letters, a questions and answers page, and a guide to the CLI/Shell.

The disks have been fully checked on an A500+ and an Amiga 600, according to Richard, the editor, and apart from a couple of utilities which are only compatible with 1.3/2.04, everything works perfectly on all formats. With more readers and a more diverse range of articles, Totally Amiga will be well-worth keeping an eye on.

GET IN TOUCH

If you want to lead your Amiga-orientated association into club country, send its details to: Steve Prizeman, CLUB CALL, CU Amiga, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.

If you write to any of the groups featured in Club Call, and require a reply, please help them cut costs by enclosing a stamped self-addressed envelope (or an international reply coupon if contacting overseas clubs).

PREMIER MAIL ORDER

*Titles marked * are not yet available and will be sent on day of release.*
Please send cheque/PO/Access/Visa No. and expiry date to:

Dept CU02, 10 Tinkler Side, Basildon, Essex SS14 1LE

Please state make and model of computer when ordering. P&P inc. UK on orders over £5.00. Less than £5.00 and Europe add £1.00 per item. Elsewhere please add £3.00 per item for Airmail. These offers are available Mail Order only. Telephone orders: Mon-Fri 9am-7pm. Saturday 10am-4pm. Sunday 10am-4pm. Fax orders: 0268 271173. Tel orders: 0268 271172
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BACKCHAT

Welcome, once again, to the Letters Pages. This is where you get the chance to air all those little views that have been laying, festering in some deep, dank corner of your mind. This month's conscript to the letter answering brigade is Jonathan Sloan.

MORE VIOLENCE

I am writing to you about the violence in computer games, there just isn't enough. People are paying about £30 for a game which contains next to nothing blood and guts wise. I think that computer programmers should get into gear and start writing real games.

You really don't have to look for far to find violent games, just look at the rubbish that Ocean is producing, along with many other companies. As they seem to be great fans of film conversions, perhaps they might like to consider converting the Texas Chainsaw Massacre into a game. What do you think?

Zeus and Thunder Lips (the Ultimate Male).

Get a life!

POOR QUALITY

Firstly, I would like to say the I enjoy your magazine and find that it contains loads of great info in the letters and Q& A sections. My only complaint is the printing quality of some of the text in the blue page section. Are you going to do anything about it?

A G Bodman, Bristol

As a matter of fact, yes. Even as I write this answer we are investigating different types of paper to use for Amiga Workshop. The printing quality is something that we keep a close eye on and we always endeavour to make the mag readable. In fact, if you look closely at the paper that this page is printed on, you may notice a change for the better.

PIRATES AHOY!

People are constantly writing in to CU Amiga saying how software prices are so dear and that if companies would lower their prices, that piracy would be reduced. I agree with this, because living in New Zealand gives a whole new meaning to high prices.

Take budget games, for example. In New Zealand we have a grand total of about six budget games. Recently, one game I saw on a budget label was being sold for the same price as a full-priced game. If software companies would introduce budget games at budget prices into New Zealand, then piracy would be reduced. In one extreme example, I saw *TV Sports Football* being advertised by a mail order company for $135. As the NZ$ works out at around $3 for £1, that makes *TV Sports* £45! And this is a budget game! Games I see advertised in your magazine for £25 retail here for about $115 – that is £37.

These prices are hardly justified even accounting for postage costs. If companies such as Ocean are really serious about wiping out piracy (in New Zealand at least) then they are going to have to make the first move by dropping prices.

Finally, I will finish with a complaint. I have been collecting your magazine since the November 1989 issue, and it has improved considerably ever since. One area that you have not improved upon is your support for overseas readers. When you have a competition for us down-under it is only for Australians. I was under the impression that down-under included New Zealand, as well. And what about your CDTV scratchcard competition. You said that overseas readers would have more time to get their entries in, as delivery times take a while. You allowed two months. It is a pity that your mag takes about three months to reach New Zealand!

Another thing is, why don't you review many games that get into the Top 20? The idea of your magazine is to inform the public on what to buy. Why wasn't *Covert Action, The Manager, Special Forces, A-10 Tank Killer*, and *Police Quest III* not reviewed? Those five games all made it to the Top 20. They may be bad, but how are we supposed to know? Surely, if you cut down the length of other reviews, you could squeeze those reviews in.

Matthew Alexander, Christchurch, New Zealand

The old argument of cost/piracy rears its ugly head once more. The simple answer is that piracy is theft, theft is immoral and illegal – don't do it. If you can't afford a game then tough luck, you must do without. Save up for a bit longer or get a job! That said, I must agree that the prices being charged in New Zealand do seem excessive, but without knowing the full details of the economy over there except, of course, that it is seriously screwed up, it would be impossible to comment upon whether the traders are being unfair or not. That still doesn't change the basic argument, it just makes it one of those little injustices in life that an honest person must live with.

The point about our user-friendliness to overseas readers is well taken. Next time we run a compo for those down-under, we'll include New Zealand and give you all longer to reply.

As for the reviews, we try to review all those games that we believe are worth reviewing. Just because a game makes it to the Top 20 doesn't mean that it is any good. As a general interest mag we have to balance our coverage between games and technical reviews, as this is what the majority of our readership have told us that they want. So, some games can be missed, but let's face it, even the games-only mags don't cover every single game that is published. However, in order to broaden our coverage, we have recently started to shorten reviews so that four can appear on one page.

And finally, why is it that so many people start a paragraph with 'And finally', only to go on with a load more questions?

ANOTHER WORLD 2

Just a quickie, the only Amiga game I have ever played through to the end, bar *Shadow of the Beast* (and that was only to show off the ace graphics to my Speccy-owning friends) is *Another World*. The game just oozes class and atmosphere, and is a shining example of the fact that even 20 billion colours on screen, 23 layers of multi-directional scrolling and a free musical towel can't make up for a good, well thought out and thoroughly playable game.

My question is this... any plans for ANOTHER *Another World* or something similar?

Mike Scott, Aberdeen

The bad news is that there are no immediate plans for Another World 2. The good news is that US Gold are at this very minute designing Flashback (see preview in September 1992 issue), which is a follow up to Another World. You'll no doubt be please to learn that CU Amiga will be giving away an exclusive Flashback coverdisk sometime in the near future and as soon as we can see the finished product we'll bring you a review. So there.

MORE SPECIALS

With regard to your Amiga specials, how about making them so that they can be removed from the main magazine. I nearly ripped the PD Special before giving up for fear of losing it. Maybe put marks for hole punchers as well.

How about a Special following a game from first idea to finished game on the shelves. This would be a fascinating insight into the software industry, and might inspire others who would like to do it. It could include sections on marketing a game design, or graphics/programming skills.. I'm sure any software company would be happy to have a journalist or two watching them, in return for the publicity that their game would get.

Of course, watching over the whole process would take a long time, but the results would be worth it. Think about it.

Robert Redman, Oxford

Cor, Robert you must be mind reader because

that's exactly what we're going to do. In the very near future we'll be running a short series on the development of a big game.

As for the binding of the Specials, well you have a point. Unfortunately, it is quite expensive to perforate all the issue like you suggest. This simply would not be cost effective for us. Before you think that you're hard done by, you've got to remember that these Specials are extra and free, unlike some other mags which charge £3.95 for theirs!

GETTING HARD

I live in Holland and buy your magazine every month. I've read your review of the *Legend of Kyrandia* from Westwood Studios and I would like to assure you that it can be played from a hard disk. Apart from the hard disk install icon on the disk there is a sticker on the box to say that it is hard disk installable. How come you missed it?

D. Ykelenstam, Hoogland, Holland

Quite a few people have called us since we ran the Kyrandia review to inform us that it is installable. Well, thank you to all those people who wished to gloat about it, but we didn't get it wrong. Yes, the game is installable, but no, there are no instructions in the manual to tell you how to do this. We were told by Virgin, the publishers, that it could be installed, but that they didn't think that it was a good idea to do so because it would slow the game down considerably! Perhaps that's why there are no instructions; anyway we reviewed it on the basis that it wasn't installable. However, as we are nice people we printed instructions on installation in January's Small Tips.

NEW WORKBENCH

I am sick of looking at a boring blue workbench screen. I can't help falling asleep. Is there any way I could brighten it up a bit? (Spray it with pictures, cartoons or other graffiti.) I know how to change the blue to another colour, but that is still too plain.

I was very disappointed when I found out that the demo of *Street Fighter 2* was non-playable. I was really looking forward to playing it on the Amiga. These stupid non-playable demos are nothing but a tease.

Mark Whirdy, Lucan, Ireland

Changing your Workbench pattern is very easy. Simply open the Workbench drawer, then the Prefs draw. Inside that you will find and icon called 'WBPattern'. Open that up and there you have a utility to change the background pattern on your main Workbench screen and on the windows that you open.

Sorry you didn't like the SF2 demo. Like you, we prefer our demos to be playable, but we'd much rather let you have a look at how a game is shaping up rather than miss out completely. Having seen the final version of SF2 I don't know why US Gold released the demo in the first place, it really doesn't do justice to the full game.

OCTAMED

I bought an Amiga 600 in the summer of 1992 and have been using CU Amiga as my main source of information about new programs, etc. I was particularly interested in the *OctaMED Pro v3* music package that was previewed in the July issue. Unfortunately, while on holiday, I missed the August '92 issue and the coverdisk with the program on it. I have tried your back issues department but they told me that it was sold out. Where can I get hold of a copy of the August issue, perhaps another reader would like to sell me his. Can you help?

Robert Daniels, Ashton-in-Makerfield

Can anyone help Robert? If you can, his address is 72 Lincoln Drive, Ashton-in-Makerfield, Nr Wigan, Lancs WN4 9HU. If he, or indeed anyone else, would like a copy of OctaMED Pro it can be obtained from AmigaNuts at 12 Hinkler Road, Thornhill, Southampton.

SWORD OF HONOUR

In your November issue you gave away a taster of *Sword of Honour*, a beat'em up from Global Software on the coverdisk. In the instructions you said that we could only have a look at the two screens immediately open to us, and that if we tried to leave them we would get a nasty surprise. Me and my friend both got that issue and we both managed to get past the dragon and onto the other screens, there was no surprise waiting, just another Samurai. Am I the first to mention this? And, if so, do I get a prize for getting past the dragon?

Steven Winner, Macclesfield

Sorry, Steven but there's no prize for you. If anyone should get one it's us – a booby prize, I mean. When we play tested that cover disk we couldn't access the other screens. We thought that what we had was all that had been given to us by the coders. With hindsight, we realised, after the mag had been printed, that the copy we had was damaged and that everyone would be able to get past the dragon. Still, no cause for complaint, eh – you got more than we bargained for.

ATARI VS AMIGA: THE END

I buy all the serious Amiga and Atari mags and, with the exception of one (ST Review), I find myself growing increasingly frustrated with an aspect of editorial policy. Quite simply, the Atari/Amiga bashing (delete where appropriate) must stop. Why? Because it's pointless and it detracts from the real issue of home computing today. It really get's my goat to hear Atari and Amiga-users slagging off the other platform when they have no real cross platform experience. That anger pales in comparison when I see similar comments from magazine staff art one title, when only a month previously they had been working for a title covering the other platform.

Now, in recent letters I've argued that both Atari and CBM had to face up to the real threat from PCs – that of superior marketing ability. Just look at the letters pages of the Serious Seven (Amiga and ST Format, CU Amiga and ST Review, Amiga Computing and ST User, and AUI); readers are confused about the the entire question of whether or not to buy an Atari or Amiga, or a PC. Why? Because, while Atari and their followers have been so concerned at trading insults, the market has been changing unnoticed.

As far as home computing goes in the UK, it's no longer an issue of CBM vs. Atari, even if, unfortunately, reps at both companies still seem to think so. I'm lucky in that I have both Atari and CBM products in my home, and that I work in the corporate computing business, which means that I have access to Apple, IBM and NeXT products. I say this because if you look at what the business computing world is doing, you can see that there is strong emphasis on alliances and mergers. All the big players – with the exception of Microsoft – have realised that to stand technologically alone is going to cause a short term future. It is a realisation that has not dawned yet on CBM and Atari or, it would appear, the majority of the home computer press. I recently asked a question regarding the possible merger of technological ideas between CBM and Atari, to create a new home computer standard. When I asked why they wouldn't do this, I already knew the answer (it was a rhetorical question), but the retort of 'Because Commodore already have a good product and Atari don't' just proved what is wrong with assuming that both companies have a strong future ahead of them.

As far as which system is best – STe or Amiga 500/60, what does it matter? But in order to stop the slanging match Here's a definitive review of the Amiga 500/500Plus/600 and the Atari STe, from a user of both Amiga and Atari products.

First, the Amigas are great games computers that can do quite a bit more besides. The graphics and sound capabilities are superb, and software support from games companies is exceptionally good. Having said that, the STe is a better computer. That will upset a lot of Amiga-users, but sorry it's true. For professional use, the STe is more flexible, better supported (despite what you read in the press), and has an incredibly varied task list. It also has a very good games capability, but it is not as well catered for by games companies as they write to the lowest ST capability, and that's the aging STFM. The current entry level Amiga is a better machine to use with video mixing, but the STe is better for Audio/Midi mixing.

The Amiga operating system is powerful, but not intuitive and leads to a lot of frustration – ever tried disk copying on the Amiga, it's a pig! For those who understand CLIs though, it is still a good OS. The Atari TOS is simple and though it can be frustrating, it's far more customisable and expandable than AmigaDOS ever will be. The multi-tasking of the Amiga system is excellent for such tasks as printer spooling and opening background programs, but the STe's ability to run auto-programs on boot up and load up to six desktop accessories is easier to utilise.

Yet, while ever the Serious Seven Atari/Amiga mags continue to support the 'my CBM/Atari is better than your Atari/CBM' argument, the realisation that there is a greater threat will go unnoticed. You under-estimate your magazines' influence on the market place. You should be campaigning to CBM and Atari that they need to wake up to the true threat of the PC, and to the end-user the fact that buying a PC is not the good idea it's cracked up to be. So what if you use a PC at work? So do I, but since I can import and export PC files direct to my STe it isn't a problem. So long as my CDTV multimedia kit is able to read PCX and Tiff graphics files, I can still work my reports and presentations. Having said that, the argument that Atari/CBM should make their machines more PC compatible is valid – yes I know that hurts but unfortunately most places of work have standardised on the PC as the chosen platform. Commodore really failed to realise this – both the new A4000 and the A1200 were speculated to include PC bridgeboards; what happened?

So, it's time for CBM and Atari to bury the hatchet and start to work together to develop a single cross-platform machine. And it's time for magazines to stop the Atari/CBM slanging match. Competition is good, but I don't think that Commodore and Atari understand just who it is that they need to compete against.

Darren Smithson, Reading, Berkshire

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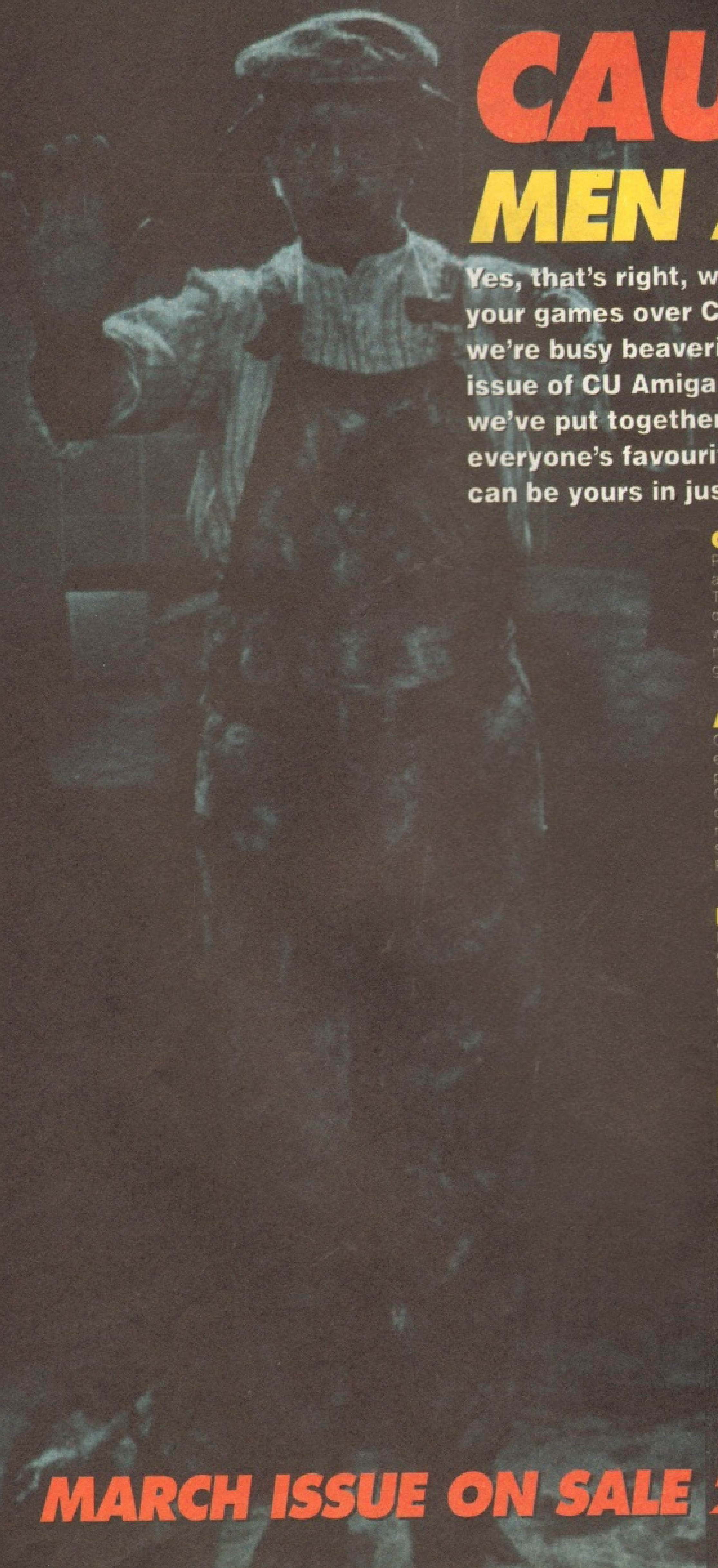
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CAUTION!
MEN AT WORK

Yes, that's right, while all you lot were playing your games over Christmas and the New Year, we're busy beavering away on the next sizzling issue of CU Amiga. And, if we say so ourselves, we've put together a particularly tasty issue of everyone's favourite Amiga magazine, and all this can be yours in just 30 days time...

COVERDISKS

Phwoar! We can't think when we last saw a coverdisk as good as next month's games disk. Both EA's *Desert Strike* and Team 17's *Superfrog* are set to appear in two hugely playable demos guaranteed to have you dribbling and drooling. And what's more we've got a superb utility to give away too – we may not know what it's going to be yet, but we're sure it'll be good nonetheless. There's confidence for you!

AMIGA WORKSHOP

Our special 32-page section aimed at the hardcore Amiga enthusiast continues to provide specific columns geared to particular interests. Interested in making music? Then Sound Check is the column for you. Or are you a BBS fiend? Then our Comms column checks out the latest boards. There's a lot more on offer, too, such as our regular Questions & Answers section, Bookshelf, the new DPaint tutorial, Club Call and Points of View.

BUYER'S GUIDES

If you're considering splashing out on a hard drive or printer, or even just a word processor or animation package, then the CU Buyer's Guides are just the thing to set you on the straight and narrow. Each month we're going to be bench testing a whole range of products and recommending the best and worst buys. Things get underway next month with comprehensive reviews of all the latest modems and memory expansions.

PHONE PAK

It's new, it's revolutionary and we've got a whole feature based around it. GVP's new Phone Pak looks set to transform your Amiga into a global communications centre. Turn on, tune in, drop out...

STREET FIGHTER 2

Yes, our amazingly in-depth player's guide to one of the year's best games continues apace, as does our hints and tips for *Indiana Jones and the Fate of Atlantis – the Adventure.*

AMIGA DIY

Our latest series of projects for the Amiga gets underway. Guaranteed to save you pounds, John Kennedy and Nick Veitch join forces to offer comprehensive blueprints for building a whole range of useful equipment and gadgets.

Contents subject to change without notice.

MARCH ISSUE ON SALE 26TH FEBRUARY

The Amiga vs. PC debate has run long and hard in the pages of virtually every serious computer mag. John Kennedy drops in his two 'penneth to say why he is and always will be a free man.

POINTS OF VIEW

OMEGA WHAT?

A short while ago, I was chatting with a university lecturer about colour quantisation algorithms, the weather and the new range of Amigas. This particular lecturer had always professed a soft spot for the Amiga, which is more than most – in fact, the Amiga and its custom chips had formed the basis for several of his lectures on computer hardware systems. His attitude had made a refreshing change from the usual reply of 'Omega what?' when the subject of my own computer system was raised.

However, in the time since we had last talked, his opinion had changed somewhat. Gone was the A3000 from his desk, replaced with a portable 286-based PC. Also gone were any loyalties to Commodore, as I discovered when I mentioned I was thinking about getting one of the new generation Amigas.

'For the price of an Amiga 4000', he exclaimed, 'I could get a top of the range 486 PC and a huge hard disk. Why should I spend so much simply to get an Amiga, when a PC could do the same job for less?'

'What about the A4000 being billed as a multimedia machine – are Commodore too late?' I asked.

'Far too late.', he replied.

I could almost hear a slowly tolling church bell in the distance, and as I stood in his office that afternoon, I was almost convinced that he was right. It was too late, the Amiga was dead. What was the point pretending otherwise?

If a man is going to have a fixation, then he could choose no better than Patrick McGoohan. This is how John Kennedy would like to be remembered.



SPILT MILK

It's a cry that has appeared in more than one magazine letters' page over the past few months, and certainly on paper, the PC argument is a good one. For the price of half an Amiga 4000, you could certainly buy a 486-based PC, which incidentally come with SVGA monitors and large hard drives as standard. Furthermore, all new PCs come with the *Windows 3.1* operating system pre-installed, and the giveaway price of a *Windows* upgrade has ensured that 10 million PCs are using the most popular Graphical User Interface ever developed.

If you are concerned about sound and graphics capability, plug-in cards are available at extra-competitive prices. Configure your machine to your needs, confident that as they come with special *Windows* drivers, you can integrate them seemlessly with the rest of your system. Flick through a PC mag and you'll see more advertisements for more PC products than you'll ever see in CU Amiga – and that's not a fault of our advertising staff.

Why would anyone in their right mind buy an Amiga, when they could have an industry standard PC for less? If you want games, why not buy a console. If you want serious software, buy a PC.

TRICKY QUESTIONS

Very good questions. Here are my personal answers:

'The PC is for users.'

As an analogy, think of the birth of the car. When motorised transport first appeared, everyone who had one knew exactly what made it tick. They looked after it, modified it and treated it as something special – an individually tailored device which they new inside and out.

These days of course, most people choose a car because of its colour. They drive it for hours every day, with maintenance being limited to adding petrol and a trip to a local mechanic when it breaks down.

'The PC is old.'

The PC is based around some extremely old technology. Forever tied to backward compatibility, every new PC has to suffer the indignities of its past, and work-around the follies of ancient memory limits. The original PC only had provision for 640k of RAM, and its memory management was convoluted to say the least. The PC should have been laid to rest years ago, but it simply won't go away. The choice between two computer systems is simple if one is already the most popular on the planet.

'The Amiga is for people.'

Putting on my Patrick McGoohan impression, I am not a User. Certainly I use my Amiga for word processing, but I also dabble with a heck of a lot of other things too: I program; I use paint programs; I compose music (of a sort) by using the internal sound capabilities and a motley collection of keyboards connected via a MIDI interface; I raytrace images; I create short animated films; I desktop publish and title home videos. In short, I use the Amiga as an extension of my imagination. I may be a sad case, but I use the Amiga almost every day – and usually for something completely different each time.

Of course, you can do all the above on a PC, but who actually does? What other machine is there that is so flexible that it can achieve all this without spending a fortune on extra cards and a greater fortune on software? I don't think there is one – the Amiga is unique.

'Amiga vs. PC.'

I don't like PCs, I'll say that now. I have had reason to use many over the years, including a 66MHz 486 machine at present, and I'll admit that I don't like them. I find the user interface cumbersome, the software clumsy and an almost intangible feel of falseness ensures I never feel comfortable using anything that spends the first minute after boot-up checking its memory for parity errors.

The PC may be a personal computer, but the Amiga is a home computer. As I live at home, that's the computer I want to use there.

I know it seems inevitable that one day the PC will be the only computer available, as Amigas and Macs and STs and Archimedes are simply not viable anymore. The day may come when Big Blue may soon rule the entire planet, but I for one will put that day off for as long as possible.

I am not a number, I am a free man!

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Real Time Digital Effects

OVERVIEW

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Real Time Digital Effects Include:

ECHO-Adds echo to incoming sound.
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Workbench 2.00 Compatible.

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VIDI AMIGA 12 — IMAGE CAPTURE

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OVERVIEW

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320 x 512	320 x 400
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OVERVIEW

Take 2, as used in *"Rolfs Cartoon Club"* is the ultimate multi-level animation package. Offering up to 4 levels of animation and 4 levels of sound. Images are drawn within your favourite art package then loaded into Take 2 as IFF files. If you own Vidi-Amiga you can digitise your drawings from within Take 2. We believe its much easier to draw with a pencil than with a mouse.

Some of the features include:

- Compatibility with all Amigas.
- Supports 2, 4, 8, 16 and HAM colour.
- Loads or saves IFF or ANIM files.
- Traditional animators dope sheet.
- Play back up to 25 frames per second.
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and lots more !!!

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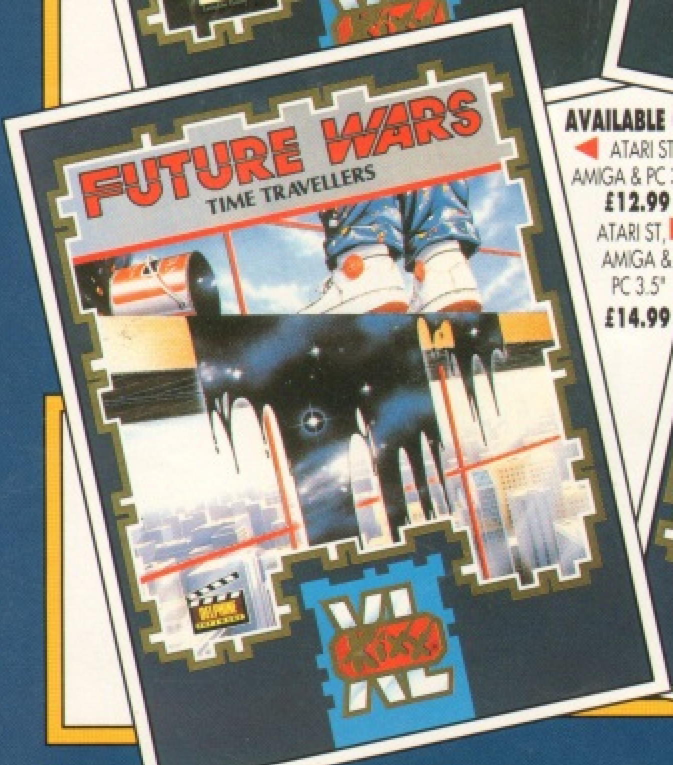
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TITLING P6

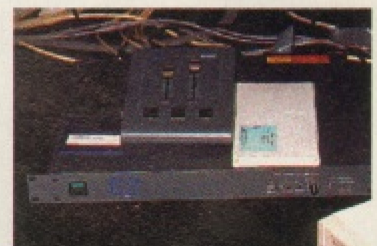
AMIGA Guide

THE COMPLETE GUIDE TO THE AMIGA

VIDEO SPECIAL

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EFFECTS P28

DESKTOP VIDEO ON THE AMIGA EXPLORED & EXPLAINED

NUMBER FOUR

FREE!

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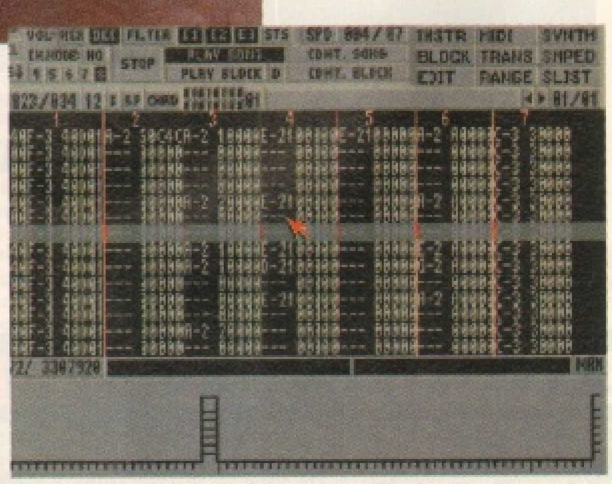
CONTENTS



Adding spinning logos to your own video production doesn't even require any extra hardware.



Find out how a genlock like this can change the way your home videos look forever. We will show you all the tricks and tips that will make your films stand out from the rest.



Adding sound to your video is an aspect of production that is all too often virtually ignored by books and magazines, but not the CU video supplement, as we give you all the information necessary to give your video an extra dimension.

If you want to knock that terrible Christmas video into shape or you are planning to release Alien³ – the director's cut, then you need help and you need it fast. Ever on hand with helpful advice, the Amiga Guide sorts out DTV.

Editorial

Welcome to this, the fourth in our series of Amiga Guides, presented free with the February issue of CU Amiga. In the past few issues and over the coming months, the Amiga Guide will build up to cover every aspect of the Amiga imaginable, from graphics to games, programming to public domain and music to something else beginning with 'm'. Each free issue of the Amiga Guide will eventually form part of the most complete guide for the Amiga ever published, so if you have missed out on any of the previous issues you may want to give the back issue department a call.

Last month was a special issue for beginners who are trying to get to grips with their new machine, or have updated to a newer version of Workbench. This month we are jumping forward a bit to explore the amazing world of desktop video (or DTV) which has for a long time been the key area for the Amiga in terms of professional use.

You can actually use your Amiga to create titles on a normal home video recorder with no extra hardware (bar a few connecting leads) required, so everyone with an Amiga and a VCR can get involved.

Of course, if you want to create entirely original productions you will need a camera, so check out our Camcorder buyers guide which will give you a breakdown of what features you can expect to get and what prices you should pay for currently available models.

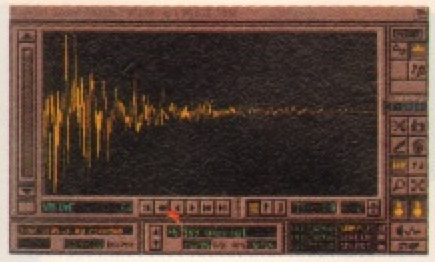
Then we're off to the exciting land of genlocks and chromakey units, which are responsible for about 80 percent of the visual and special effects that you see every day on the T.V. If you ever wanted to present the weather or read the news, this is your big chance.

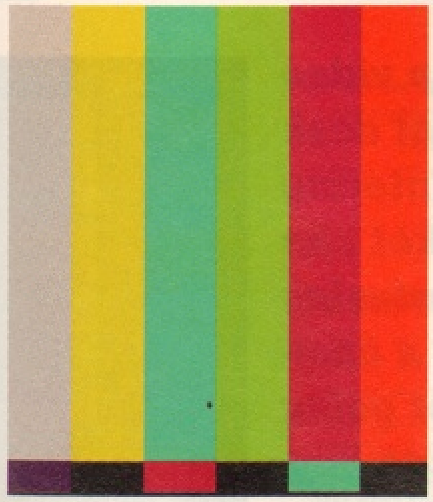
We will also touch on sound recording and editing, an area not often covered, even in the dedicated DTV press. Of course, to cover this subject properly would require another supplement, but at least we'll give you an idea of what you are up against.

Of course, it all comes to nothing if you can't edit everything together and produce a watchable video at the end of it all, so check out the hints and tips that will keep you straying from the path of sanity.

I hope you will find this guide as informative and entertaining as the last three, and be sure to write and tell us if you think there is any aspect of the Amiga which you think could use its own guide.

Contents











As well as showing you how to use your equipment, don't miss our buyer's guide which will show you what to buy and what to pay if you are thinking of increasing your desktop video power.

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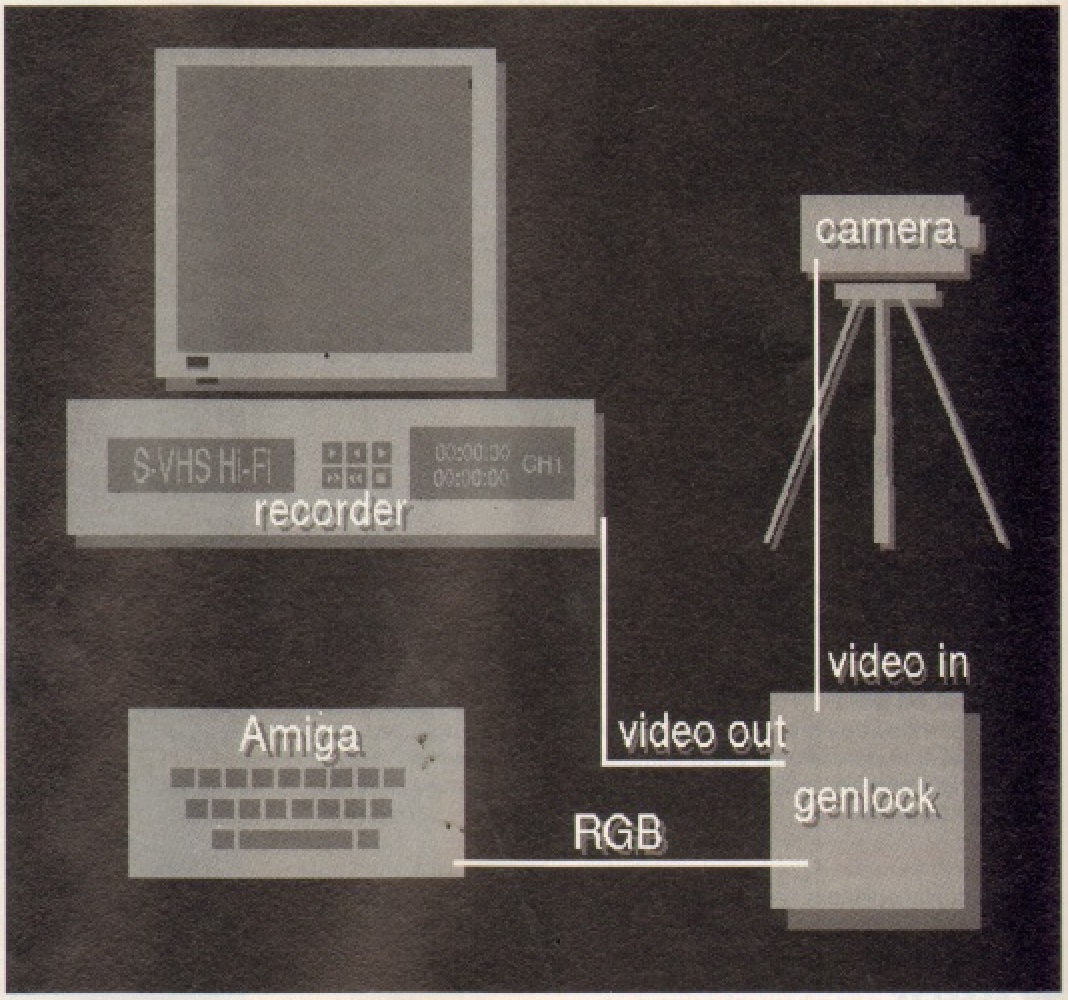
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CU AMIGA
EMAP Images
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London EC1R 3AU

This issue of the Amiga guide is free with the February '93 issue of CU Amiga, and must not be sold seperately even if you do really need the money.

INTRO

What is desktop video and what sort of desk do you need? Entering the video market can be even more confusing than choosing a computer. We're not going to tell you what to buy, but help you understand the difference between what you might buy.



A typical small studio set-up. Although it would be nice to have an SVHS deck to master your tapes on (or even something a bit more expensive) you can still manage a quite acceptable setup with anything you find lying under your television.

What is the difference between desktop video and ordinary video then? Well, desktop video obviously takes place on some sort of desk doesn't it? Well, no. In fact there is no real difference at all, video people just use DTV to describe a more computer oriented way of putting video together.

Everything that you can use your computer for in the production of videos is quite easy to do without a computer – you just use another dedicated box of electronics for the task. However, putting this the other way around it is easy to deduce that instead of buying lots of dedicated boxes you can replace them all with a computer.

The Amiga has proven itself to be particularly useful for video work, both with amateurs and in professional studios. It comes with more than adequate colour and screen resolutions for titling, it can produce a full overscanned video image, it supports interlace mode which is required for stable high quality video images and it is easily expanded with video hardware such as genlocks and chromakey units.

SETTING A STANDARD

Okay, so you've got the right computer, now all you need to do is go out and buy a camcorder and Ridley Scott had better be off down the job market. Unfortunately it is not quite as simple as that.

All camcorders are not the same. Despite what features they might have in the way of auto-focus zoom lenses, stereo microphones and stop frame capabilities, they all record to tape at some point.

The standards used are far from being just the same thing in a different box, so we'll now go through them in order of ascending quality.

VHS is probably the best known format. It has been around for more than 10 years and for...

INTRO INTRO



Choosing the right format is the first important decision you will have to make.

about the last six years it has been the industry standard for home recorders. Unfortunately that doesn't mean it is any good. It's resolution is around 210 lines. If you have ever tried freeze-framing a VHS tape at an action packed part of a film you will undoubtably have come across the strange jerky motion as two halves of the image on alternate lines (the 'fields') seem to be out of sequence.
When the rush was on to create a format for domestic use, a lot of corners were cut. Whilst VHS might be alright for taping Eastenders on whilst you're out, it's hardly worthwhile trying to remake Bladerunner with it.

VHS-C is essentially the same specification as VHS, but in a smaller cassette for camcorder use. It is slightly better quality though, mainly because the head technology had advanced a bit by the time VHS-C came out.

VHS-HQ Later domestic recorders included some extra image enhancement circuitry. It does give slightly better quality, especially in a reduction of colour bleeding, but it's a long way from pleasant to look at.

8mm This format is another popular one for camcorders. A slightly higher 260-280 lines of resolution give a better picture, and this format really took off because it was possible to produce much lighter recorders for it. Also, 8mm cameras were the first to feature flying erase heads (as explained later in this issue) and used metal tape.

SVHS-C The second wave of camcorders used a new system of splitting the video signal into two parts. Instead of encoding all the information into one channel with the inherent losses involved (this is why composite is all noisy and blurred) a Super VHS camera separates the signal into Chromanance (colour) and Luminance (brightness) channels. Together these are known as a Y/C signal. Added to this a much higher resolution of over 400 lines gives greater picture quality which is especially noticeable in slow motion and freeze frame operations.

SVHS-C is completely incompatible with normal VHS and VHS-C, although SVHS equipment is capable of recording on ordinary VHS tapes and SVHS tapes can be recorded on in VHS mode and then used in VHS equipment.

SVHS is the full sized version of SVHS-C. It gives slightly better results, mainly because the recording heads are larger.

Hi8 is to 8mm what SVHS is to VHS. Hi8 is a high band system, giving a slightly greater resolution than SVHS and also uses a component (Y/C) output. The high bandwidth and properties of the metal tape also give it superiority over SVHS, though it can probably only survive the same number of generations.
Above this level you are really out of amateur status and into the ranks of professional equipment, including near-broadcast quality U-matic recorders, one inch decks, and digital systems like D2.

Unless you are jolly rich you probably won't be interested in any of this stuff, and the really sad thing is that generally, the more expensive it is, the faster it is going out of date.
If you already have a video deck that you were hoping to record on, and it's only a nasty old VHS deck don't worry too much. It's most likely that you are going to want to dub down to a VHS deck at some stage anyway. As long as it has flying erase heads (see the editing section) you should be alright.

That doesn't mean that you can't mix and match the rest of your equipment though. If you have a Hi8 camera you can always dub across to an SVHS deck, etc.

Remember that a lot of high street stores hire out decks too. You may be able to hire out a deck 'on approval' for thirty days (a nice SVHS one with jog-shuttle etc.), make your final edit on it, produce a master and dub down to your standard VHS deck to run off a few copies before taking it back.

THE SET-UP

So what do you actually need for a DTV set-up. Well, it depends on what you want to do. The minimum set-up is really a master deck, Amiga, genlock and a camcorder. The camcorder can double as a player for any off-line effects or titling you wish to do.

Progressing up the first thing to do is usually to get a better genlock. Cheap genlocks often have difficulty locking on to the signal from a VTR, they are designed to be used on live video coming from a camcorder. Also, the better ones will usually have faders, mixers and perhaps even a wipe control, which can be particularly useful.

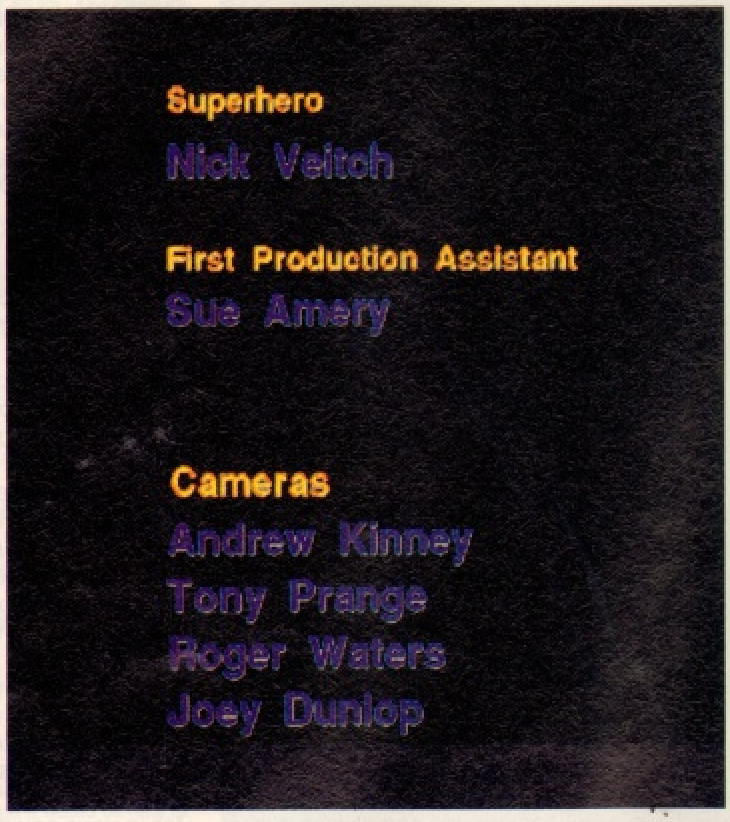
If you are careful you can build up a very good system in stages, without having to buy a whole load of equipment which later becomes useless to you. Over the next 30 or so pages we will be showing what to look for in your equipment as well as how you can use it.



Selecting the right camera may be as important as having bought the right computer.

TITLING

Remember to antialias your fonts to prevent jaggies occurring, which are more noticeable when overlaid onto video images.



Most custom video titling gizmos consist of a character generator and a genlock. They can be very expensive and ultimately they are all far less flexible than the most humble of home computers.

For many people the initial foray into the terribly complicated world of Desktop Video is titling. It's cheap, it's easy, and you don't actually need any extra equipment.

You don't need a genlock to have a go at titling. In fact, if you own a copy of *DPaint* you are ready to go almost straight away. When you think about it, most titling is done at the beginning or end of a film anyway, so you don't actually need to overlay graphics.

Most video recorders have a composite input so you can just connect up your composite out from the Amiga and off you go.

KEEP IT LEGAL

Because of the way images are encoded onto tape, there is a slightly foreshortened range of colours that can be recorded by it.

This means that what passes for white in video land, is actually a light shade of grey in the Amiga world (about 13:13:133 on the RGB scale). Because of the bandwidth used by the tape, any colours 'brighter' than this will cause problems and are known as 'illegal' or 'false' colours.

The effect of using these colours is not always disastrous. White is the worst offender, but anything with an RGB value of over 13 can be problematic. Usually the audio track suffers badly, with a high pitched whine creeping in, but occasionally glitches or field wobbling may occur.

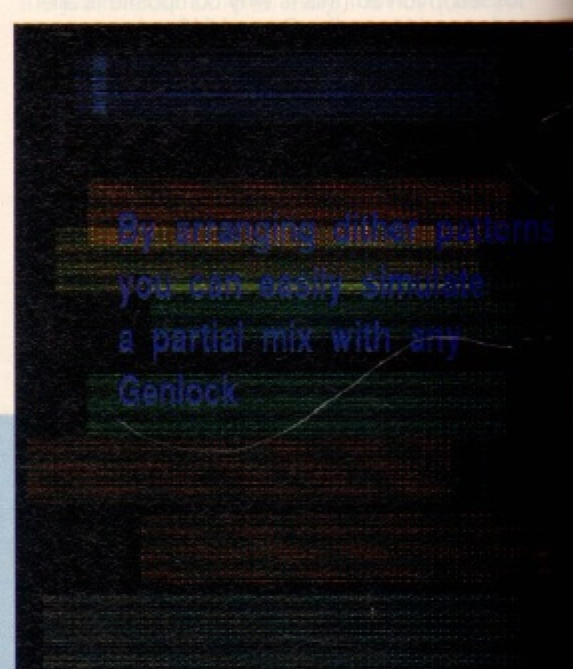
The only thing you can do really is to make sure you keep the colours low. An image processor like *Art Department* will allow you to adjust the dynamic range of an image, but it could be tedious treating every frame of an animation in this way.

SCROLLING

There are a number of dedicated scrolling packages for use with credits and tiles, but you can just create an animation in *DPaint* if you like. It may not be as smooth, but it'll be acceptable. The jagged effects of bitmapped fonts are accentuated when using a genlock over a piece of higher resolution video.

Antialiasing the fonts makes some difference, but remember that the software doesn't know exactly what the background is going to be.You can do this in *DPaint* too.

It is a good idea to do a dry run first, to make sure that the text appears in the correct place and that the fonts are legible and stand out enough from the background. Outlining a piece of text in a dark or bright colour can make all the difference.



Partial mixes can be created by using fill patterns in *DPaint* which include some transparent colour. This effect has actually been used in many pop videos.

TITLING

CREATING YOUR OWN LOGO

Few things look as professional as a good company logo. Any large corporation worth its salt will have spent millions on market research, and paid a talented design team thousands to come up with the ultimate expression of dependability, trust and timelessness.

Alternatively, they may have mucked around on an Amiga with a Ray Tracing package.

RAY TRACING

An image rendering program such as *Imagine* can create a photorealistic picture of something that exists only in your head. The hard part is usually getting the raw information into the package, but once there you can experiment with different textures and colours until it's just right.

As an example, let's create a logo for CU Amiga, to go at the start of the (hypothetical) new range of cookery videos presented by our well known master chef, Nick "I'll never get that curry stain off" Veitch.

The logo is to be a traditional shiny chrome sixty foot high logo, resting on a chequered floor –nothing too original. The chrome letters are to reflect blue sky and clouds, and the entire image is to be ray traced at a high resolution to look as realistic as possible (or as realistic as sixty foot chromium letters or a giant kitchen floor can look.)

Step 1

Draw out the logo in a traditional 2D paint program such as Deluxe Paint. When using text, use scalable fonts to avoid jaggies. Use a high resolution interlaced screen of two colours to pack in as much detail as possible. Save the image as an IFF.

Step 2

From within *Imagine*, load the IFF and transform it into a solid. An option in the Object Editor will perform this automatically. Extrude it slightly for a bit of depth.

Step 3

Get into the attributes menu and make the object 'chromey'. The Imagine manual doesn't want to tell you how to do this (as it doesn't want to be a manual at heart really) but it simply involves making it black and very, very reflective.

Step 4

Create the floor. I used a large disk, covered with the slightly reflective texture 'checks'.

Step 5

Load both objects into the Stage Editor, and position the camera for best effect. Remember to select 'Camera View' or you'll get a surprise when you render the image.

Step 6

Add some light sources. I used two – one for a main light, and one for a subtle fill. You probably can't tell from the finished picture!

Step 7

From the action menu, select the global requester. In the 'global brush' area, enter the name of your favourite sky picture you have. As this picture will only be seen reflected in the letters, you can get away with creating one yourself in *DPaint*. Simply choose a blue background and airbrush some white fluffy blobs onto it.

Step 8

Add a graduated sky, some stars and adjust the light sources to add shadows if necessary.

Step 9

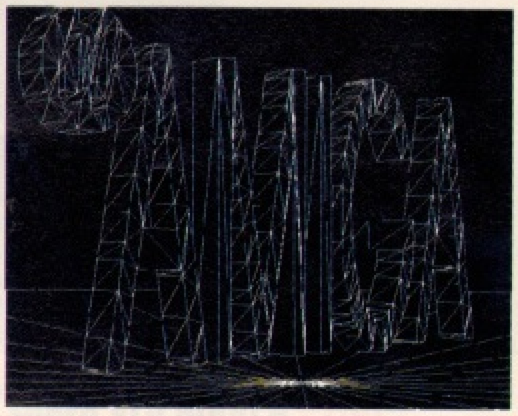
From the Project Menu, try a few small quarter screen scan line renders to check everything out.

Step 10

Select a high resolution interlaced 24-bit image, choose ray trace mode and go to bed. Twelve hours later you will wake up to a beautiful new logo.

Step 11 - optional

Animate the logo by getting the letters to whizz on-screen, or the camera to track around and around. When the image is moving, there is no need to go the extremes of ray tracing the image – scan line will suffice perfectly well.



You may have to process your colours prior to recording to keep them legal.



Obviously, to use 24-bit images you will need a 24-bit card and the appropriate lead or encoder to enable you to connect it to your VCR. HAM images can look pretty good though, particularly if you are only going to use VHS.

ALL ABOUT CAMCORDERS

Combined with the right software and hardware, an Amiga can become the centre of a powerful video system. But unless you're happy to source all your video images from TV or pre-recorded tapes, you also need a way to create your own video images, and this is where the camcorder comes in.

You can make a start in video production with a CCTV (closed-circuit television) type video camera. Though relatively inexpensive at around ú100, these cameras normally offer only a black-and-white image, and rely on mains power.

For colour video recordings on the move, you need the most popular fashion accessory of the techno-set – a camcorder.

Combining a video camera and a videotape recorder – hence the name – camcorders are now the fastest-growing area of consumer elecronics, with around 600,000 units sold in the UK alone last year. The manufacturers estimate that one million will be bought in 1993, and that still leaves an enormous potential market, especially among owners of computers and VCRs.

But how much do you have to spend on a camcorder, which do you choose and what can they do for you? All modern camcorders have roughly the same basic features. A series of optical lenses focuses light on a CCD chip made up of many thousands of pixels which convert the light into an electronic signal.

A built-in microphone converts sound into another signal, and both sound and picture signal are recorded on a video cassette tape, which can be replayed in the camcorder, or in another video machine linked to a TV or monitor.

The camcorder is powered by a rechargeable Nicad battery, or via an adaptor from mains power. A Nicad battery will normally give you around 30 minutes recording before it needs recharging, so it's wise to have some spares.

A small built-in TV monitor, either a mono CRT or a colour LED, allows you to check the recording, and the camcorder will have a variable focal length lens, allowing you to zoom in and out on the subject.

You can also expect to find manual and automatic zoom and focusing controls, transport buttons to shuttle through the tape, and features such as a picture fader, and backlight compensation to adjust the exposure for silhouetted subjects.

When you're choosing a camcorder, the first task is to decide how much you want to spend - new models cost from ú400 to ú2000, and it's not wise to buy second-hand since repairs out of guarantee can be horrendously expensive. It is wise, though, to look in the shops for previous years' models rather than brand-new machines – that way you'll save hundreds of pounds on end-of-line machines, and still get a full guarantee.

Your next step is to decide which format you need (see the Formats Guide for the pros and cons of each format). Then it's a matter of shopping around for a good price – dealers are often willing to throw in a few tapes, a spare battery, even an equipment bag or a tripod to secure a sale.

USEFUL FEATURES

A few camcorder features are particularly useful if you intend to capture video images and transfer them to your Amiga, perhaps through a digitiser or genlock.

Zoom range is important for capturing distant objects; a 6x zoom is pretty weedy, 8x is standard, and 10x is more like it. Digital zooms can offer up to 64x, but they do this by enlarging a small central portion of the video image, so picture quality drops drastically.

Manual zoom and focus are important for precise control of recordings – autofocus and powered zoom are OK for point-and-shoot family videomakers, but serious camcorder users need more hands-on control.

Fast shutter speeds are crucial if you want to capture steady still images of fast-moving objects such as sporting events.

Stereo sound is handy if you have a stereo sound sampler for your Amiga, and want to record sound effects together with your video images.

Finally, an infra-red remote control takes a lot of the hassle out of shuttling through your 8mm tapes – VHS-based camcorders don't really need a remote control, because it's assumed you will be replaying the tapes in a VHS VCR.

Just combine a camcorder and an Amiga, and there's no limit to the video wizardry you can enjoy.

RDERS

This Panasonic model features a digital 16x zoom, complementing the 8x optical zoom, but unfortunately it's automatic only, there is no manual option.



RECOMMENDED BUYS

Chinon VC1600 – £399

Available only through Dixons and Currys, this is the cheapest new camcorder on the market.

It's a VHS-C model with a mono viewfinder, mono sound, an 8 times zoom lens, and both manual and auto zoom and focus. Performance isn't brilliant, but there's a selection of fast shutter speeds, dual-speed recording and a date/time display. Oddly, it isn't supplied with a VHS cassette adaptor.

Amstrad VMC8 – £499

One of the cheapest 8mm camcorders, the VMC8 has an 8x auto/manual zoom lens with a macro feature which allows you to focus very close on small objects.Sound is mono, and the viewfinder is black-and-white. Other features include a 32-character title superimposer and a single fast shutter speed. Picture performance is good considering the price.

Canon E230 – £499

This discontinued 8mm model is still available in some shops at attractive prices — shop around for bargains. Excellent features include a 10x auto/manual zoom lens, auto/manual focus, a rotating 'flexigrip' for easy shooting from low or high angles, six fast shutter speeds, automatic interval recording timer, caption generator and infra-red remote control. Sound is mono, and the viewfinder is black-and-white.

Hitachi VM-E31 – £649

An inexpensive 8mm 'palmcorder', small enough to be operated with one hand. The E31 manages to pack in loads of good features including auto/manual focus and 8x zoom, six fast shutter speeds, fader, character generator, and digital signal processing to give excellent response to changing light conditions.

JVC GL505 – £799

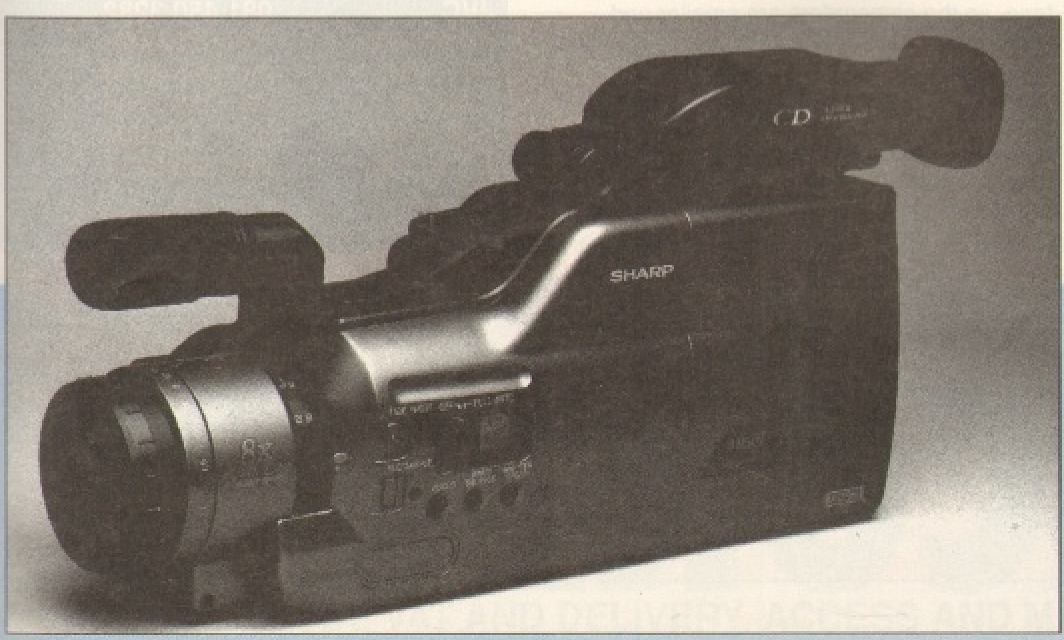
A reasonably inexpensive entry into SVHS. An eight times zoom, fader, several shutter speeds and superb quality stereo boom mike make this a medium-weight performer. The 'animation' facility allows reasonably impressive animations of about four frames per second to be made very easily.

Sharp VL-C8000 – £700

The cheapest camcorder to feature a colour LCD viewfinder, this VHS-C model also boasts 12x auto/manual zoom, fader, five fast shutter speeds, and good editing facilities. Colour LCD monitors are a mixed blessing; colour rendition is usually good, but the image is grainy and tends to blur when you move the camcorder.

Panasonic NV-S7 – £1000

The S7 is expensive for a palmcorder, but it does offer excellent S-VHS-C picture quality, hi-fi stereo sound, and other advanced features. These include a 16x digital zoom in addition to the 8x optical zoom, a socket or an additional external microphone, six fast shutter speeds, VITC timecode, digital image stabiliser, and other effects. Unfortunately there's no manual zoom (power zoom only), and manual focusing uses tiny buttons rather than a lever.



This is the cheapest model to feature an LCD colour viewfinder. Whilst the colours are rendered well, the resolution isn't amazing.

The Canon E230 8mm camera offers excellent features for a rather low price. It has been discontinued but is still available in many stores.



Sony TR-805 – £1100

This amazing new Hi8 palmcorder features an image stabilisation system which irons out small movements by the user. Other goodies include stereo sound, 10x power zoom, auto focus, manual over-rides for focus, colour balance and exposure, and RCTC, a form of video timecoding useful in the editing process.

Acronymics

BLC – Back Light Compensation, a video signal boost feature used by camcorders to correctly expose objects silhouetted against background light

CCD – Charge Coupled Delay, the form of microprocessor used by the light-sensor of a camcorder

CRT – Cathode ray tube, the picture display used in most TVs and in mono viewfinder camcorders

LCD – Liquid Crystal Display, the form of colour viewfinder used in some camcorders

NICAD – Nickel-Cadmium, the formulation used in most rechargeable camcorder batteries.

NTSC – National Television Standards Committee, the 525-lines picture-scanning system used in American video systems. Also scathingly known as 'Never The Same Colour'.

PAL – Phased Alternate Line, the picture-scanning system used in UK video and television equipment.

RCTC – Rewriteable Consumer Time Code, used by Sony and others, a digital frame-numbering system used by some camcorders which allows frame-accurate video editing using a compatible edit controller unit.

VCR – Video Cassette Recorder, like the VHS models usually used in the home .

VHS – Vertical Helical Scanning, the recording method used in the domestic VCR and some camcorders

VITC – Vertical Interval Time Code, a system similar to Sony's RCTC, but used by Panasonic and others.

FORMATS

All UK camcorders use the PAL video system, compatible with standard TVs and VCRs. PAL creates a picture from 625 horizontal scan lines, so all camcorders offer this horizontal resolution. However, different camcorder formats offer different numbers of vertical lines, and this makes a great deal of difference to the quality of the final picture.

The original video format is VHS, as used in most domestic VCRs. This offers vertical resolution of around 230-250 lines. The problem with VHS camcorders is that they're big and bulky – perhaps that's why they're still popular in America, where they like everything big!

An alternative is VHS-C (Compact VHS), which has the same resolution as VHS and uses the same form of tape, but in a miniaturised cassette. This slips into an adaptor for replay on a domestic VCR. Though smaller and lighter than VHS camcorders, VHS-C camcorders are limited by the 45-minute maximum length of tapes (90 minutes in Long Play mode).

Each of these two formats has a 'high-band' version giving 380-400 lines of vertical resolution. S-(Super)VHS and S-VHS-C camcorders cost more, and S-video recordings cannot be played on conventional VHS VCRs.

The alternative to VHS-C is 8mm, also known as Video 8. This uses a smaller 8mm tape, so the camcorders are smaller and lighter than VHS-C. They also give slightly better picture quality (around 240-260 lines), better sound, and longer tape playing times of up to 120 minutes. The problem is that an 8mm tape cannot be played on a VHS VCR – unless you buy a special 8mm VCR, you have to connect cables from the back of your 8mm camcorder to your VHS VCR or your TV to play back the pictures.

The more expensive high-band version of 8mm is Hi8, which gives comparable picture and sound quality to S-VHS. Again, Hi8 recordings cannot be played on standard 8mm machines.

While high-band camcorders can be connected to standard VCRs and other equipment, you will not get the full high-band picture quality unless you have a complete high-band (or 'S-video') set-up; perhaps including an S-video compatible genlock for your Amiga, an S-VHS VCR, and an S-video or RGB-compatible TV or monitor. Total cost would be around £3000.

CONTACTS

If you are not experienced in video equipment it is probably a good idea to go to an authorised dealer and explain just what it is you want from a camera (it may be an idea to take this supplement along too). Here is a brief list of numbers for the major distributors and manufacturers who should be able to give you advice.

SONY	0784 61688
PHILIPS	081 689 2166
JVC	081 450 3282
PANASONIC	0344 853943
TECHNO	081 898 9934
CANON	081 459 1266
AMSTRAD	0277 228888
HITACHI	081 848 8787

CAMCORDERS

GENLOCKING

The genlock has done for DTV what the laser printer has done for DTP. For under a hundred quid, you can produces your own Chart Show. Genlocking is one of those very basic concepts that become surrounded in mystery.

Put simply, a genlock will permit Amiga graphics to overlay a video signal. For example, with a genlock will allow you to draw a funny moustache on a live video image. What it won't do is to allow a computer image to sit behind a live video signal.



Colour bars are useful for checking that all your equipment is working and giving out the correct level of signal.

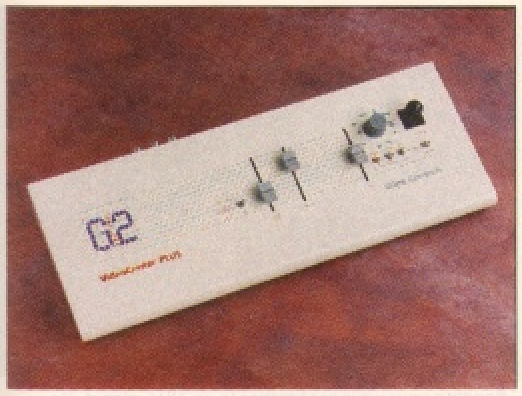
There are many colour bar test patterns and pattern generators in the public domain. Check out your local library or take a look at some of the ads in CU Amiga.



Here is the news – the picture graphic appears to be in the background.


Subtitles can be made less obtrusive by a mix of 70%.

More advanced units can provide wipe effects for selective genlocking.



HOW IT WORKS

The genlock must somehow mix two signals, one from the Amiga and one from a camcorder or video tape deck. In principle this should be easy, in practice it's not. Although the two signals are the same – fifty frames a second of video information – their timing signals are slightly adrift. As the timing of the live signal cannot be changed, the Amiga must be altered - the genlock will actually speed up or slow down the Amiga until it is 'locked' to the live video.

This is why you should never format a disk or perform other time critical operations with a genlock in place – you can't be sure of the accuracy of the internal chips. If you format a disk whilst watching Neighbours through a genlock, you might have to watch Neighbours everytime you use the disk in the future.

ANY COLOUR YOU LIKE

A genlock always keys on one colour at a time, in other words it replaces one particular occurance of a colour with the live signal. Usually this colour is colour 0, so any part of the Amiga image made up from colour 0 is effectively transparent.

Thus to provide subtitles to a video, you would create an Amiga display totally filled with colour 0, except for the words. The colour 0 disappears and the live video shows through, with the text superimposed on top.

Exactly the same technique is used to provide those 'over the shoulder' monitor views that you see on The Nine O'Clock News. If the newsreader shifts over the right too much, you can see that the image is planted over the top and not actually projected behind them as first appears.

CREDITS

One of the most obvious use of a genlock is to add credits to your video. You know the sort of thing: "Produced by CU Amiga, Written by CU Amiga, Starring CU Amiga" and so on. With the right software these credits can even scroll up the page just like on the telly (see the section on Titling for more information.)

You might think that a genlock isn't really necessary for some credits, as the Amiga output can be recorded directly to tape. This is true, but most genlocks provide fading facilities which will add a touch of professionalism.

FADE TO GREY

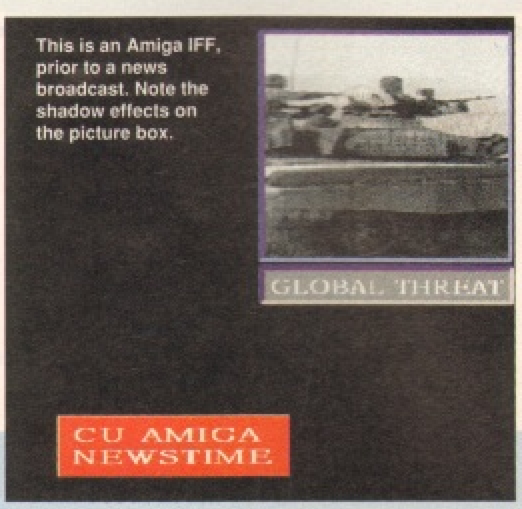
Any but the simplest genlock will have some knobs and buttons. At the very least, there must be a way of selecting Amiga graphics only, live video only or a mixture of the two. The ability to fade both or either in or out is advantagous, as is being able to fade the entire image to black when it's over.

Some top-of-the-range genlocks also provide various 'wipe' effects, so you can choose the method by which the video and computer images appear. The G2 V2 genlock even has a little joystick to accurately position the wipe effect which can add a whole new range of special effects.

GOING LIVE

It should be pointed out that genlocks work best when used for video coming live from a camera. Images which have been taped are prone to suffer tearing at the top of the screen. This effect is also noticeable with some of the lower priced units. The Rendale 8802 and the G2 systems both worked perfectly with live signals, and very close to perfectly with taped images.

The moral is to use a genlock with live video whenever possible. Obviously this is not always feasable – outside broadcasts for example, and in these cases the quality of your recording equipment will soon become apparent.



This is an Amiga IFF, prior to a news broadcast. Note the shadow effects on the picture box.

THINGS TO DO WHEN BUYING A GENLOCK

Unfortunately, the only way to really check that a genlock device is behaving properly is by pluging it in, cranking up some test bars and sticking the output through a vectorscope. There are a few tell-tale signs though.

- Try to avoid models which plug directly into the Amiga instead of being connected via a cable. Not only does this not allow you more scope in positioning the unit, it also means that with all likelihood the connector is soldered straight to the board inside. This means one day you are going to drop something on it, or wriggle it a bit too vigorously when getting it out, and the whole board will crack

- If you are in a shop, ask to see it working. They may not have facilities to test it much, but at least you'll be able to see if it exhibits any adverse fringing effects.

- Try and video the results of your testing, then watch the playback. There will always be a drop in quality, but many things that a stout monitor will shrug off (like a badly synching signal) will throw the tape way out.

- Try to genlock over an incoming video signal. Admittedly this depends on the quality of the output from the video deck, but it will also show you how good the genlock is at coping with substandard signals (as most video outputs are). Tell-tale signs to watch out for are screen-tears at the top where the interlaced images separate from each other.

GENLOCKING

KEYING

When you start to use a device like the RocTec Chromakey, you know that the professional studios better look out. Remember what you can't do with a genlock? You can do it with a Chromakey.



With a bit of imagination, a paint program and a very stupid person to stand in front of the camera, you can create some excellent effects with a chromakey unit.

Video keying like this is a whole new ball-game. A genlock will superimpose computer graphics onto live video, but doing things the other way round is a major achievement. The fact that you can do it for less tha3n 300 is closer to being a miracle, especially when your realise just what it is that you can do.

IT'S A MIRACLE

Ok, you have a wonderfully rendered ray-traced image of an alien planet on your Amiga, and what you want is to add your brother to it so it looks as though he's actually there — it's impossible, right? Wrong.

A keying device which can achieve this has a lot of work to do. First of all it must synchronise the video signals, just like a genlock. Then it must examine the live video – not the Amiga signal mind — and remove an occurrence of a particular colour. This is then merged with the Amiga video to produce some amazing results. Back in the old days it used



Sending your younger brother to an alien planet, far away, is now possible on an Amiga near you...

to be called CSO – Colour Separation Overlay – but now it's Chromakeying, presumably because

The trick lies in the removal of a single colour from the live video. For example, the BBC plonk Bill Giles down in front of a bright blue screen. Their chromakey removes this blue part of the video and replaces it with a computer generated weather map. As you can see, here at CU Amiga towers we have achieved exactly the same thing.

There are more exciting pictures to produce than weather maps. Any Amiga image can appear in the background, including animations. For the amateur science fiction director, a Chromakey is the tool which will make all the difference.

CATCHES

There are several catches to the Chromakey process. The first is that you also need a decent genlock – we used the RocTec device with the G2 genlock for some amazing results.

The other catch is a little more tricky. Because the chromakey replaces one colour, it can be a little difficult to use in a non-studio setup. The background colour must be uniform and very evenly lit. Any discrepancies and the computer graphics won't show through.

Worse still, any unwanted occurrences of the key colour will be rendering transparent. Therefore if Bill Giles were to wear a blue T-Shirt, his entire upper torso would become invisible — an effect which although stunning is hardly useful for weather forecasts.

LOOK UP IN THE SKY!

When chromakeying proves difficult, the alter-

CHROMAKEYING



With a wipe unit on the genlock, you can selectively key areas of the screen.



Some bizarre effects are possible. Here some hapless tramp is sucked into an A500's Workbench. Chromakeying over applications could be very useful for tutorial videos.



If you digitize suitable backdrops, you should be able to make a complete movie masterpiece without ever leaving the studio, as seen here in a clip from 'Electra Glide in Green'.

native process of lumakeying can come to the rescue. Instead of using a key colour ('Chroma') the keying process can use a threshold brightness ('Luma') and replace any part of the image which exceeds a certain light level.

The most obvious example of a bright uniform background is the daytime sky. Anything standing against the sky can be made to appear against the computer background. Lumakeying is easier to control than Chromakeying, but is better suited to outdoor work as it is slightly less flexible when a good studio is available.

Problems with both forms of keying can occur when the position of the camera changes – whether by accident or design. As the background comes from the computer, it does not move and the overall effect can be unsettling. For example, if a mountainous alien landscape is added to an ordinary suburban setting, and the camera is hand held rather than mounted on a tripod, the shaking effect will cause the entire computer generated sky to separate from the live video totally spoiling the effect.

The only possible way to counter this effect is to create a computer animation of the background which totally matches the view expected when the camera moves. This sort of effect is beyond the scope of most rational beings.

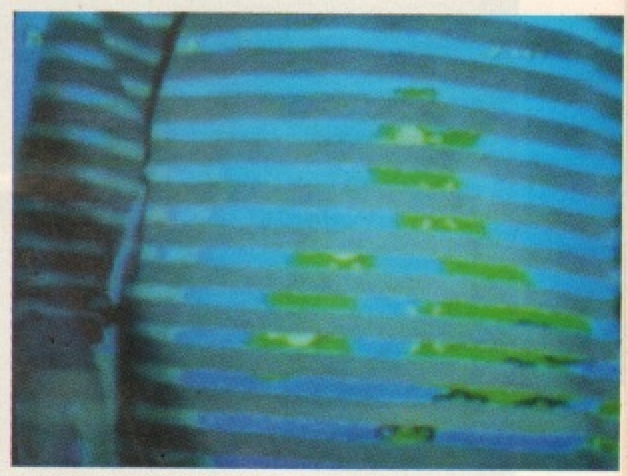
The RocTec device offers both Chroma and Luma keying, and also doubles (triples?) up as an RGB splitter for digitisers in its spare time.

Various special effects are possible, allowing some normal genlocking to occur at the same time as keying — very strange and wonderful footage can result in messing with the buttons.

EFFECTS

Essentially, a chromakey unit allows you to produce an incredible range of effects. Virtually all those nasty things they used to do to people on top of the pops can now be done on your Amiga. If you use the RocKey in conjunction with a genlock which has wipe facilities you can even selectively key areas of the video image.

For more foolishness, see the guide on simple effects on page 28 of this supplement.



When it comes to keying, stripey colored jumpers are out. Also check for highlisghts and shadowa when lumakeying.



Okay, so the BBC have got better maps, but it's amazing what you can knock up in *DPaint*'s HAM mode.



The sequence was stored as frames in an anim file, then simply called up when required by the 'vision controller'.



The only thing you are without is a small, left-handed person who knows how to find Fishbourne without a map.

SOUND

Many home recorders have the capability of recording HiFi quality soundtracks on ordinary VHS tape.



Video takes you to another dimension. Its a dimension of sight, but as Rod Serling knows very well, it's also a dimension of sound. It's very easy to take sound for granted, but in fact adding realistic sound to your video productions can be one of the hardest things to master.

If most of your real video footage is going to be supplied by a camcorder then it will almost always be accompanied by a soundtrack recorded at source. It is very difficult these days to find a camcorder without some form of built-in microphone, and many of them are very good indeed.

The camcorder microphone will record anything in range whilst it is recording. The sound will obviously be synchronised with the video image on the tape and everything will be perfect.

Unfortunately, the microphones are pretty good. Not only will they pick up any sounds from the scene that you are shooting, but more often than not the cameraman sniffing and mumbling about how cold it is. Even more disturbing, the camcorder mike usually picks up various mechanical noises from the recorder itself – the lens zooming, buttons being pressed, even the noise of the tape going around.

This isn't really the fault of the camcorder, but there is very little you can actually do about it. The best solution is to use another microphone.

This doesn't mean that you can't record the sound directly to the videotape, as a large number of camcorders have a socket for an external microphone.

SOUND

A boom microphone is one of those long things that look a bit like a giant furry sausage. They are particularly useful for picking up background sound as well as the noise from any action that is being filmed. On the other hand directional microphones will only record sound from the particular region they are pointed at. They generally have a greater pickup range and are extremely useful for medium length shots where the microphone has to stay out of shot and still pick up action. For really localised recording lapel or radio mikes are the best, but they are expensive.

HI-FI SOUND

Most mid-range video recorders and camcorders now boast Hi-Fi stereo sound – have a look on pre-recorded tapes for the logo. Listening to a concert in stereo can really revitalise rather stale images.

The two tracks of high quality sound are actually recorded on the same piece of video tape as the picture. By use of cunning, the sound information is embedded beneath the surface of the tape, and so doesn't interfere with the video signal.

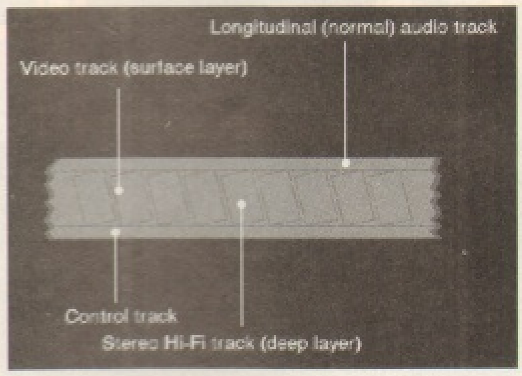
Stereo decks are very useful for recording NICAM broadcasts from off-air, as the quality is really quite exceptional. Also, many feature films have their sound tracks recorded in stereo or even full surround sound - with a suitable decoder you can watch Pink Floyd's The Wall and listen as the Stuka bomber from the opening scenes actually flies over your head.

All Hi-Fi equipped decks can use the 'normal' audio sound track as well. This is a mono audio signal and although far from CD quality, is fully compatible with all VHS machines, and can also be a life saver from an editing point of view.

USELESS

As the Hi-Fi sound is encoded into the video information, it can quickly become useless when several scenes are spliced together. As the view cuts from scene to scene - which may not have been recorded in chronological order - the sound track can quickly become an insoluble aural jigsaw puzzle.

As the sound quality from the Hi-Fi tracks are of exceptional quality, it is best to try to use them whenever possible. At a later date - known as post production – they can be remixed and dubbed it back in.



The sound track as it relates to the other information stored on tape.

THE POWERS OF DUB

For a scene such as a figure walking down a street, the sound effects can actually be added afterwards. The 'audio dub' feature on most decks will allow new sounds to be recorded on the normal audio track. This track can be redone as many times as you like with no degradation in picture quality, as only the sound information is being re-recorded.

The noises can be the original sounds taped at the time, or some which you have created at home using a pair of old boots and a tray of cat litter. The BBC have produced many excellent sound effects records which you use to add interesting background noise such as traffic, farm animals or nuclear holocausts according to your need.

To add Hi-Fi stereo sound – for example, adding high quality stereo music to a pop video – there is no option but to duplicate the video to another deck, using the 'simultaneous broadcast' option to add the new sound track. With high quality systems such as S-VHS and 8mm, this extra generation will probably not be noticeable.

As far as the audio mixing equipment needed goes, it's possible to get by with the cheap mono only mixers which High Street stores such as Dixons stock. These mixers are perfect for recording voice overs onto tapes, for example an explanation as to exactly why Uncle Harry has an Easter Egg up each trouser leg.

However, if you want to remain in the stereo domain as much as possible, a proper mixing deck is called for. Quite cheap 'disco decks' are suitable, as are the 'home recording studio' orientated decks such as the Yamaha AM602, which permits up to six channels to be mixed and panned. Mixers such as these cost in the region of £150-200. A mono deck will suffice to start with, and will still prove useful if a move to stereo is made, as it's quite impossible to have too many inputs.

NARRATION

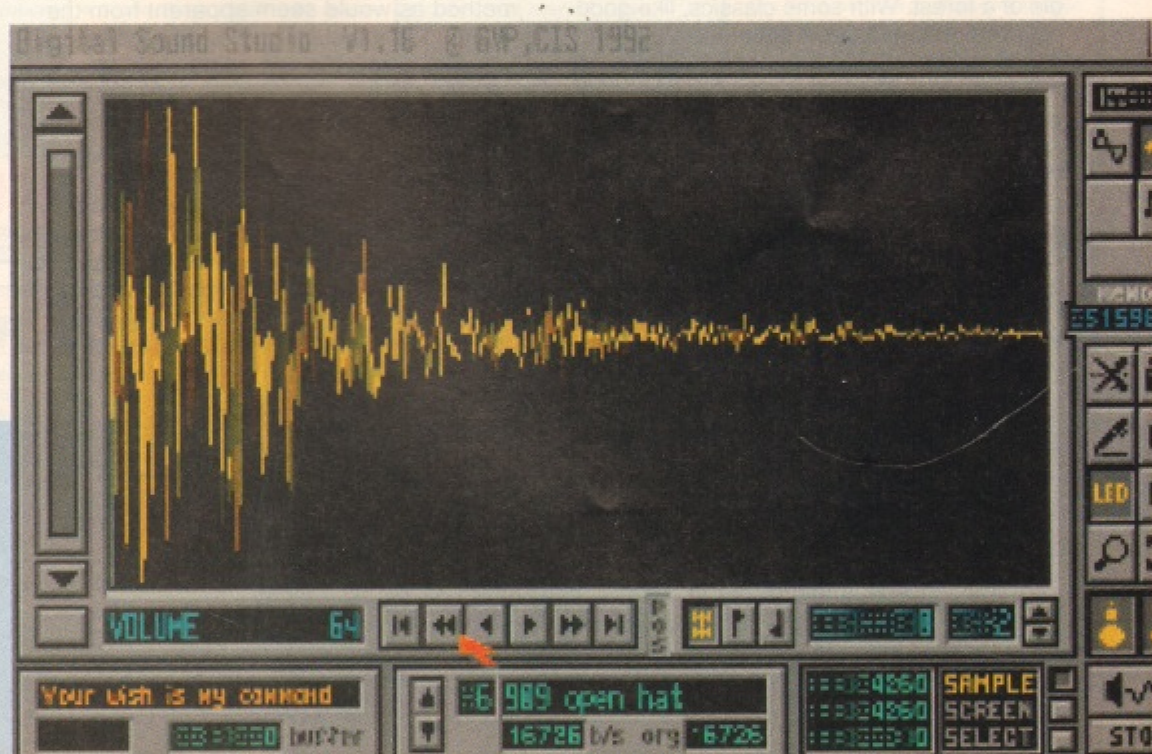
As the mono and stereo tracks are completely independent, they can be used for totally different purposes. For example, with clever use of audio dubbing facilities a mono spoken narration could be added to a hi-fi music sound track. Sometimes the twin tracks of the stereo sound are even used to carry voice-overs in different languages. Some Amiga based editing systems use the stereo tracks to carry time codes and permit frame accurate editing.

SMPTE

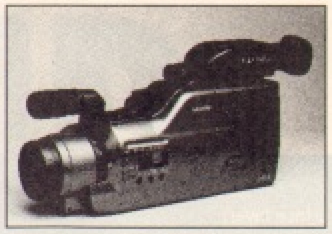
When music and video need to be integrated perfectly, professional time code systems such as SMPTE come into their own. With a suitably equipped MIDI system, the sound track can be completely locked to the video. Many Amiga MIDI sequencer packages can be expanded to make use of SMPTE interfaces.

MUSIC

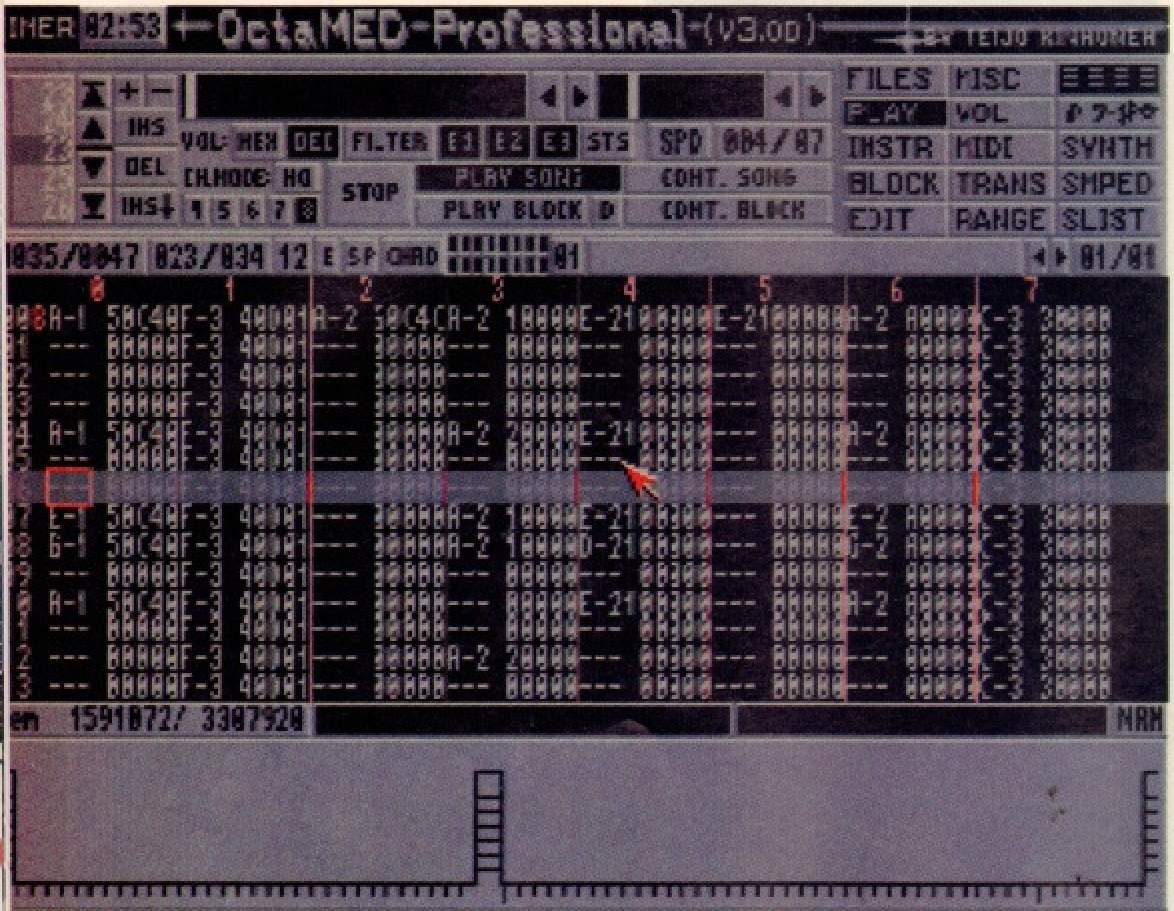
One of the things which can most alter your finished video is the addition of a soundtrack. Music very often sets the mood in a video and



Sampled sounds are great for spot effects as they can by triggered at the touch of a button, instead of having to cue in a tape.



Check to see what sound capability your camcorder has.



If you are feeling particularly brave you can sequence effects with an Amiga package such as Med, but it is a good idea to check the timings quite thoroughly, as tape speed can vary on different decks. Make sure that the deck you use to get the timings is the same as the one you use for the final audio dub.

without it horror films would not be horrible, comedies would not be as comic and dramas would be rather disappointing. Even basic presentations can benefit from a liberal dose of information on the audio tracks.

In fact with the right music you can completely alter the viewer's perception of what is going on. Take an example: a shot in the middle of a forest. With some classics, like good old Verdi wheeled out, it becomes a celebration of nature, all nice and beautiful. Switch to a few chords nicked from Hammer's House of Horror (only kidding Mr. Lawyer person), and it soon transforms itself into the stuff of nightmares.

Much music, like old classics, can be used (as long as the particular performance you are using isn't copyrighted) with impunity, but beware of using any popular music in your videos without obtaining the proper permission.

Many libraries and shops will stock copyright free CDs, which are essentially the same as PD software. Some sound effects can also be obtained in this way.

FOLEY EFFECTS

A Foley effect is one that is generated and dubbed onto the film at a later date. Often these effects are not generated by the same method as would seem apparent from the visual (e.g. the classic ruler on a table simulating an arrow striking a tree).

Foley artists have to train long and hard to be able to conjure up effects from seemingly nothing, but simple effects can be accomplished by almost anyone.

Adding sound effects in this way not only makes filming a lot easier but also allows you more time to get the effect the way you want it. No-one is going to do 36 takes of climbing up a wall just because you didn't quite get the right sound of their feet against the brickwork.

SOUND

SOUND CHECKS

The recording of sound and dubbing onto video is really a subject that could fill another complete supplement. Try to experiment as much as you can with the equipment you have before using it in earnest. There is a best way to record sound, but it's a very expensive way – learn the limitations of the equipment you have and learn to avoid tricky situations, and bear in mind the following tips:

- Always make some sort of recording of the 'natural' sound when videotaping – even if it is very low quality it can be used as a guide as to what sounds to add in later.

- Remember that sound suffers a similar degradation in quality over successive generations as video. High frequencies are usually the first to suffer with the result that speech sounds mumbled.

- If your video must go through several post-production phases, don't rely on the soundtrack on the original tape. Jumps in sound are just as annoying as bad cuts in the film.

- When interviewing people or recording conversations always get the participants to record an extra couple of phrases (like "yes", "That's right", "certainly not", "the", "and" etc.) which can be used to join an edited soundtrack.

- If using Amiga samples as sound effects remember that they are only 8-bit samples. Always try to use samples generated at a decent rate.

- Don't expect sound and vision to match up perfectly from different tapes, even if they both originated on the same tape. There will always be some lead or lag in sound, so it's best to avoid too many areas when it becomes easy to notice that sound and picture don't match (e.g. close-ups of people talking).

- Editing cuts become less noticeable if sound and vision are not cut simultaneously. A few frames less or more sound can make all the difference.

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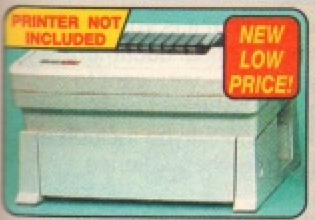
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For Swift 9, 24, 24e, 200, 240 and 224 Printers

- Helps keep pace with Citizen Printer's powerful paper handling
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RRP ~~£23.00~~ **£19** +VAT= £22.33 ref: PRA 1242

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- 192cps Draft, 48cps NLQ
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RRP	£239
COLOUR KIT	£38
STARTER KIT	£25
TOTAL VALUE:	£302
SAVING:	£143
SILICA PRICE:	£159

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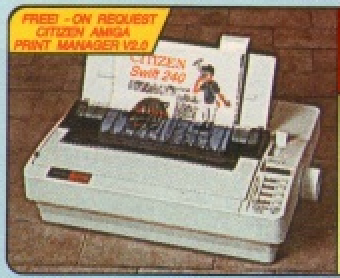
192 CPS 136 COLUMN

- Citizen Swift 9x - 9 pin - 136 column
- 192cps Draft, 48cps NLQ
- 8K Printer Buffer + 3 Fonts
- Parallel Interface
- Graphics Resolution: 240 x 240dpi
- Epson and IBM Emulation
- Colour Option Available
- FREE Silica Printer Starter Kit

RRP	£329
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TOTAL VALUE:	£354
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SILICA PRICE:	£199

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- Auto Set Facility - Bi-directional I/F, Auto Emulation Detection
- Command Vue IV Front Control Panel
- Ultra Quiet Mode - 43dB(A)
- Colour Printing Standard - Swift 240c, Colour Printing Optional - Swift 240
- FREE Silica Printer Starter Kit

SWIFT 240 MONO

RRP	£339
STARTER KIT	£25
TOTAL VALUE:	£364
SAVING:	£125
SILICA PRICE:	£239

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SWIFT 240C COLOUR

RRP	£359
STARTER KIT	£25
TOTAL VALUE:	£384
SAVING:	£125
SILICA PRICE:	£259

£259 +VAT= £304.33 ref: PRI 2571

24 PIN PRINTERS



270 CPS 80 COLUMN

- Citizen Swift 200 - 24 pin - 80 column
- 270cps SD (15cpi), 216 cps Draft, 72cps LQ
- 8K Printer Buffer - 40K maximum
- Parallel Interface
- 6 LQ Fonts
- Graphics Resolution: 360 x 360 dpi
- Epson, IBM, & NEC P20 Emulations
- Quarter Printing and Auto Set Facility
- Ultra Quiet Mode - 44.5 dB(A)
- Colour Option Available
- FREE Silica Printer Starter Kit

RRP	£269
SILICA STARTER KIT	£25
TOTAL VALUE:	£294
SAVING:	£115
SILICA PRICE:	£179

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192 CPS 136 COLUMN

- Citizen Swift 24x - 24 pin - 136 column
- 192cps Draft, 64cps NLQ
- 8K Printer Buffer + 4 Fonts
- Parallel Interface
- Graphics Resolution: 360 x 360dpi
- Epson, IBM and NEC P6 Emulation
- Colour Option Available
- FREE Silica Printer Starter Kit

RRP	£489
SILICA STARTER KIT	£25
TOTAL VALUE:	£514
SAVING:	£215
SILICA PRICE:	£299

£299 +VAT= £351.33 ref: PRI 2574

INKJET PRINTER



360 CPS 80 COLUMN

- Citizen Projet - inkjet - 80 column
- 360cps Draft, 120cps NLQ
- 50 Nozzle Head - Whisper Quiet 47dB(A)
- 8K Printer Buffer + 3 Fonts
- Optional HP Compatible Font cards
- Parallel Interface
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- HP Deskjet plus emulation

RRP	£496
TOTAL VALUE:	£496
SAVING:	£151
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PRINTER STAND

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PRA 1274	Swift 9X/24X	£30.66

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RIB 3949	Swift 9x Black	£7.15
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RIB 3248	PN48 Single Strike	£3.61
RIB 3348	PN48 Multi Strike	£3.61

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PRA 1240	Swift 9x/24x	£35.25

PN48 ACCESSORIES

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PRA 1155	PN48 Cable Extn	£29.37
PRA 1162	PN48 Car Adaptor	£16.80

Accessories prices inc. VAT & delivery

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Which computer(s), if any, do you own? 55M

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EDITING

Take three hundred miles of video tape, a nice tape deck and recorder and get cracking. With a bit of luck you might end up with about 30 seconds of footage.





Using a good deck is essential to producing videos of sufficient quality that other people can stand watching them. Jog-shuttles and other gimmicks are handy but not essential.

Many people think that editing is one of the largest creative processes behind any finished production. That may be, but the content of the film is not decided at this final stage, it should be decided before you even start shooting. The editing process actually begins before a single frame has been recorded.

PREPRODUCTION

Initially you will have an idea. And hopefully it'll be a good one good. But you need to work out how to express that idea in the medium in which you are working. No matter what your idea is you always know certain things about how it will be expressed.

Firstly, you should know what it is you want to say. If you are making a critical documentary, this may be fairly simple – you want to show all the facts to give a balanced argument for or against something, and maybe include a conclusion of your own or let the audience decide.

Maybe it is a training video, in which case you want to detail every part of a process, explaining as you go and building up to all the steps necessary to perform a certain task.

In a story, you will usually have a central character straining against some obstacle which stands between him and something he wants and the idea may be to highlight some moral dilemma or injustice.

Whatever it is you are planning, you should always know what the message is, and keep that in sight during the whole production.

You will also nearly always know the sort of people who will be watching it. This is very important because it may have an effect on the style you use to present your idea. Training videos normally work best with some element of comedy, to keep the viewer interested (because most people watching training videos are probably a captive audience). Think about what the audience are trying to get out of the video.

Another thing you usually know is how the video is going to be seen. Again this can affect the style. If you are shooting a promotional video for a shop for example, it will need to have lots of bright, attractive images and an interesting soundtrack to get peoples attention.

SCRIPTING

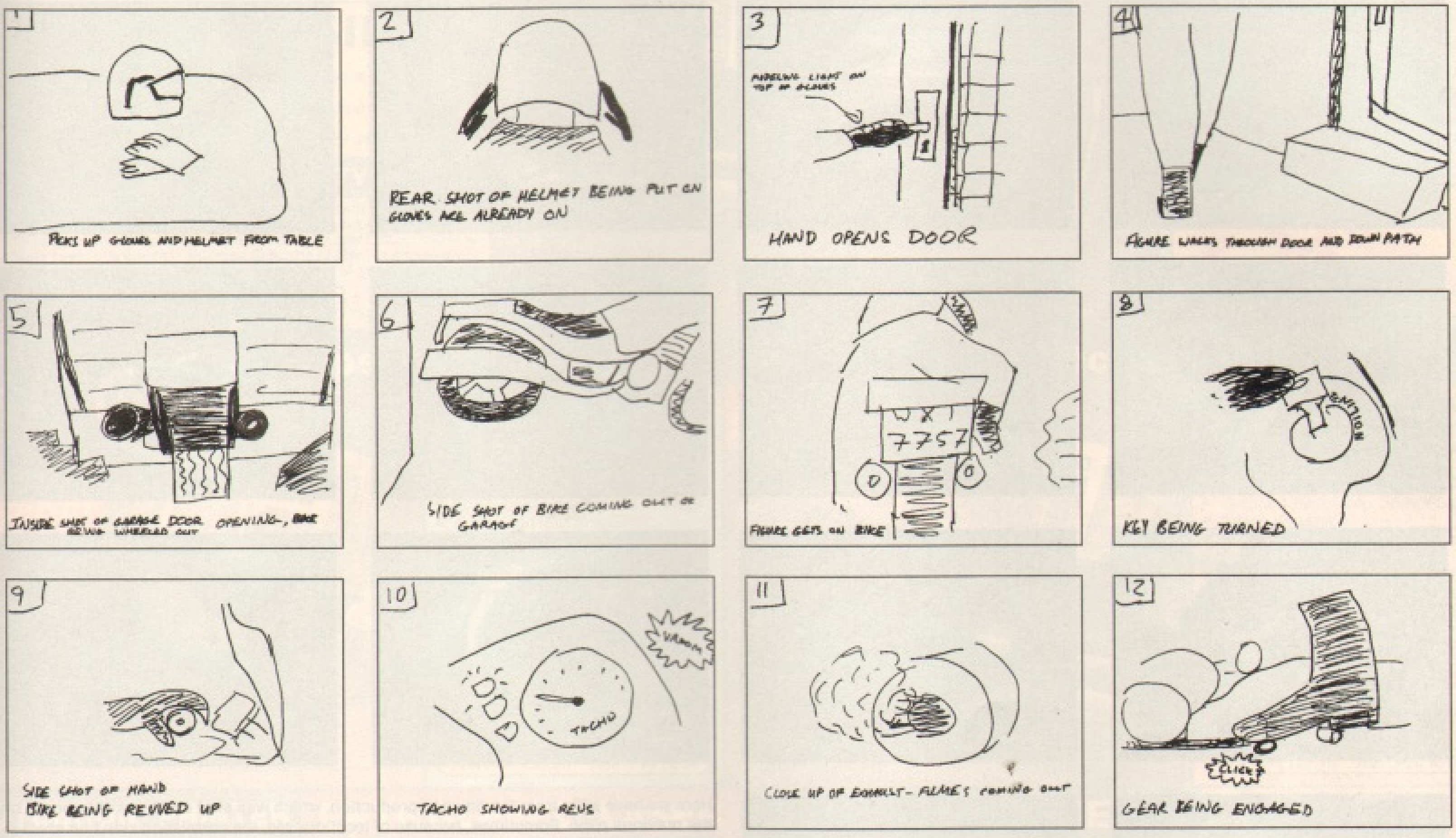
Once you have decided what it is you want to say, and how to say it, you need to decide what you have to shoot. This will initially take the form of an outline, just a few notes and a brief summary of the story.

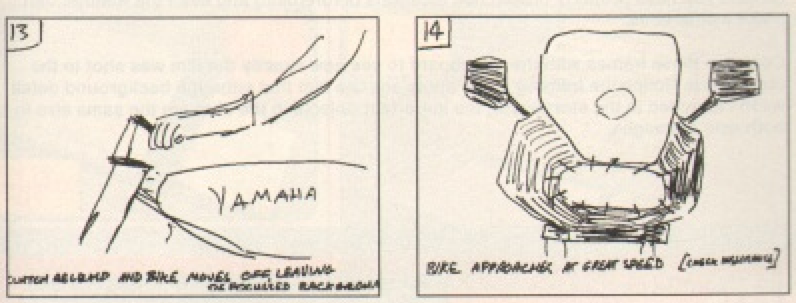
This can then be broken down into scenes, and you may be able to give specific timings for them. Sometimes you can try scenes out before you do any filming. If there is a scene of an actor going down some stairs you could just time yourself going down the stairs to see how long the shot will take.

It is a good idea to get into the habit of working within a time frame rather than just adding bits on until the project is finished. In the real world TV directors have to work within very tight timing schedules. If you have to make a ten minute video it is a lot better working out scenes and subtracting values from the length of the video, than just adding on scenes until you reach ten minutes.

The next thing to do is produce a storyboard. It doesn't have to be elaborate, but it should give an idea of what the shots are going to

EDITING





Your storyboard doesn't have to be a work of art, but should describe the type of shot and explain the action. Timings and sound information is also useful, but a storyboard will only work if it's easy to understand.

You can include sound information visually, by adding little effect noises inside bubbles. You could even add the script to the film this way.

Various notes on lighting can be added if desired. In frame three here we see that an extra modelling light will probably be needed to bring out the shape of the glove. Avoid getting too complicated though, your script should contain direction notes and lists of props etc, the storyboard is just to give you an idea of what you are trying to achieve in each scene.

look like, the camera angles and the framing of the shot. Always number them and describe the scene underneath. The notes may be quite extensive if you are not going to be working all the cameras, so the man actually using the camcorder knows what he is supposed to shoot. When Ridley Scott had a storyboard made for Aliens it was done in the form of a huge comicbook.

The last thing you should do is work out a filming list. It may not be necessary to film all the scenes in chronological sequence.

FILMING

Armed with your script, shooting list and storyboard you now know exactly what you want to shoot. Things can still go wrong though. It's all very well filming exactly to plan, but what if, when everyone has gone home, you discover things have gone totally wrong on your production. It may be expensive or just not physically possible (in the case of a sporting event for example) to film everything again. Here are a few tips to minimise the potential damage.

• Always shoot plenty of tape. It's cheap, because you can re-use it. In some cases it may be worth trying to shoot everything possible (e.g. in sporting events when you don't know what is going to happen all the time).

• Use as many cameras as you have available. Again, in sporting events this is obvious, but it could be useful to have more than one camera (and cameraman) when shooting other types of video.

• Always have plenty of spare batteries and tape on hand. In cold weather tape can snap, and batteries die even if they have just been recharged.

• When shooting multiple takes, just leave the camera running. It may use more tape, but there will be more space between shots to leave nice editing points.

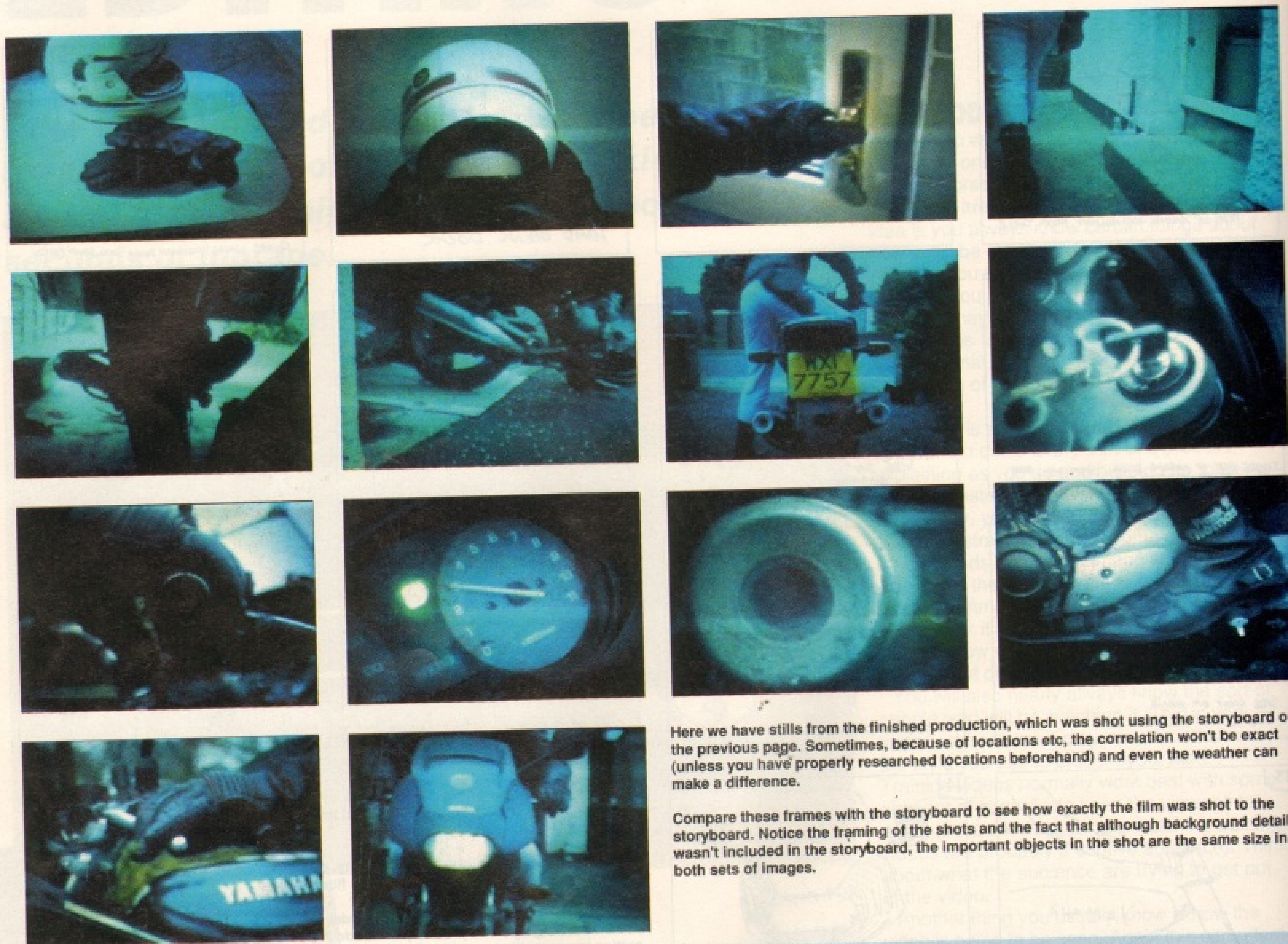
• If you are not going to be using the audio track on one camera, you can do a voice over as you are filming, making notes which may be useful when it comes to the final edit.

POST PRODUCTION

Now you have miles and miles of tape you can go about putting the film together. Strictly speaking, there are elements of using the computer (like animation for example) which would be considered as part of production, but in a small desktop environment it doesn't really matter. At this stage, if you have not done so already, you can create your special effects or genlock titles over finished footage and so on.
To create the finished film you will need an edit decision list. This is rather like a script, but this time you will be specifying exact pieces of video that you will be using, not footage that you are planning to get.

In productions like wedding videos, this may be where most of the creative decisions are made, since you only know vaguely what you are going to get before you start filming. After doing a few edits manually you will begin to understand why so many people use edit controllers (like Editman and Video Director on the Amiga(. Usually audio is left until last. It usually

EDITING



Here we have stills from the finished production, which was shot using the storyboard on the previous page. Sometimes, because of locations etc, the correlation won't be exact (unless you have properly researched locations beforehand) and even the weather can make a difference.

Compare these frames with the storyboard to see how exactly the film was shot to the storyboard. Notice the framing of the shots and the fact that although background detail wasn't included in the storyboard, the important objects in the shot are the same size in both sets of images.

won't have to go through as many generations as the pictures, so to preserve quality it can be put on at the final stage.

The simplest method for audio dubbing is to time the edited film very carefully finding all the "start tape", "tape in" and "tape out" points. Then start the dubbing VCR and use an audio mixer to bring the tape in and out at the right time. A backing track can be running through the mixer all the time, with just the voice overs and effects coming in from tape.

It is usually easier to break this task up and do it in small sections at a time, but it is still just as complicated as editing the video images (if not more so).

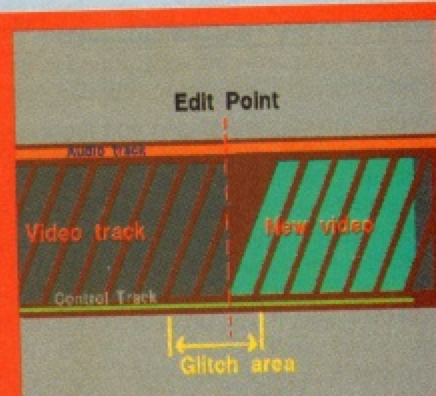
The one thing to remember above all is that the production will be judged on the final tape, not on the way in which you put it together. Plan your editing the way you feel comfortable with it and around the equipment you have.

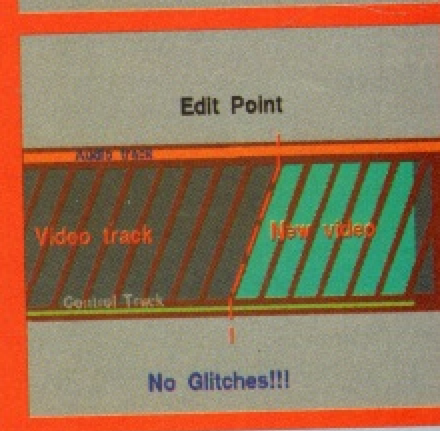
ELIMINATING GLISTCHES

Glitches occur when an assemble edit is made on equipment not fitted with flying erase heads. The glitch will appear to scroll down the screen, because the video information is stored diagonally on the tape. This means that the glitch actually lasts for a few seconds rather than just a blip in a couple of frames.

The only way to eliminate this is to use flying erase heads on your master deck. They can control the part of the tape which is erased at the edit point, leaving you glitchless. Some heads can also control the end point of the erasing process which means that you can perform what are known as insert edits.

Whatever equipment you use it is worthwhile reviewing every edit after you have made it to make sure everything is perfect. You don't want to find there is an error in the title sequence halfway through a 20 minute production.





CASE STUDY

It's all very well talking about the Amiga's potential in Desktop Video, but does anyone actually use it? Yes they do, and here to prove it is a mini-profile of Amiga enthusiasts New Concept Productions with a special chance to get a free 55 minute instructional Amiga video (you pay only P&P).

DECKS, FLIES AND VIDEOTAPE

The concept behind New Concept came about when a company which had been successful in catering to the fly-fishing industry decided that it would be a nice idea to add an instructional video to their range of products.
After investigating the possibilities it became apparent that the cost of having an independent production company produce such a video was more expensive than setting up a small studio to do the job themselves.

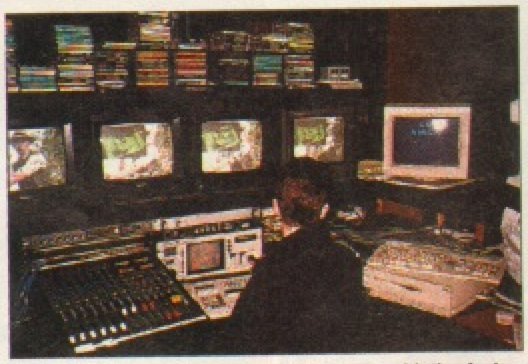
Obviously one of the first pieces of equipment to be included in the set-up was an Amiga, and soon it was forming part of a full broadcast quality studio and helping to build up the largest collection of specialist videos in Europe (marketed through the Burgess Video Group).

The Amiga is not limited strictly to titling work, although that is where it excells most. Many animated excerpts from tutorial videos have been created using the animation power of the Amiga in conjunction with a digitiser. Even images rendered in *Real 3D* have found their way onto the screen in a Fly Fishing video.

Much of the work is carried out by more expensive equipment though. Three M2 decks provide frame accuracy and component quality for the production of clean, clear and glitch free videos. Effects are generated by a state of the art touch screen DVE (Digital Video Effects) unit. Sound is dubbed on using an eight track mixer and drawing on an extensive selection of pre-recorded music and CDs.

This is not the end of the Amiga's involvement though. When the videos are finally finished There is still the artwork for the box to be done. All the covers for Burgess Video's tapes are produced by scanning images into an Amiga and incorporating them with the relevant text with an Amiga DTP program.

The high quality proofs are supplied by a Canon colour laser copier which, with its built in PostScript engine, is driven directly by the Amiga. When the proofs have been checked and corrected, the Amiga then produces Macintosh format disks to be taken to an output bureau, where the final film is produced.



The centre of New Concept's video studio, with the Amiga kept handy on one side.



Titles are genlocked on using one of the professional G2 Systems' units.



Sound is added via an 8-channel mixing desk. Note the DVE unit to the right.

THE AMIGA VIDEO COLLECTION

HISTORY OF THE AMIGA (45 minutes)
An entriguing and entertaining look at the origins of the Amiga computer. Listen to initial trials and tribulations which Jay Miner and the rest of the original Los Gatos gang went through.

ANIMATION VOLUME I (48Minutes)
The Original Amiga World Animation Video that will fascinate, entertain and inspire viwers as it demonstrates the amazing capabilities of Amiga animation.

ANIMATION VOL II (90 MINUTES)
Exciting, innovative animations using such programs as Lightwave 3D, Imagine, Sculpt 4D and Deluxe Paint III. You'll be thouroughly entertained by these animated stories.

HOW TO ANIMATE (45 MINUTES)
Relevant to novices and intermediate users alike, pick up helpful tips and techniques on using *Deluxe Paint IV* from Joel Hagen. Also includes tips on *Lightwave 3D*.

THE DELUXE PAINT IV VIDEO GUIDE
Takes you on a guided tour through *Deluxe Paint IV*'s features – learn how to use metamorphosis, the light table and more. This video teaches you the basics of *Deluxe Paint*'s tools and is ideal for beginners, altthough even experienced users may learn a thing or two.

ADVANCED TECHNIQUES WITH DELUXE PAINT IV
Learn tips and tricks for combining *DPaint*'s different tools for spectacular effects with professional results. This video is a must for all *DPaint* users.

BENNY THE BEAR (30 MINUTES)
A full half-hour cartoon for children entirely produced on the Amiga. Let your children enjoy the cartoons as you enjoy the animation techniques.

ANIMATION 101 (60 MINUTES)
Part 1 – many exciting animations are incorporated into this introduction to the Amiga system - it will slingshot your imagination in all directions.
Part 2 – How those exciting animations were made along with tips on video production and editing. All animations are recorded in real-time using only the basic computer and software.

HOW TO SHOOT VIDEOS

KNOW YOUR CAMCORDER AND FUNDAMENTALS (90 MINUTES)

How to buy the camcorder and accessories that are right for you. Don't be conned into buying a more expensive model, just for the sake of marketing hype. Use your Camcorder to its fullest advantage and discover hidden talents.

HOW TO SHOOT VIDEO LIKE A PRO (90 MINUTES)

Learn the fundamentals of composition. Bonus! How to transfer your slides/home movies to video.

CONTINUITY AND COMBINING SHOTS (90 MINUTES)

Learn how, when and why to use correct panning and zoom techniques. 7 Key steps for good continuity. How to really tell a story with video.

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See *Deluxe Paint IV* used in a video production
See Bump mapping effects created in Real 3D
See the speed increase given by 68030 and 68040 processors

DESKTOP PUBLISHING

See DTP software in professional use.
See the new *Art Expression* software from Soft-Logik.
See *Art Department Professional* in use, scanning and processing images.See Full colour publishing on the Amiga, using peripherals such as a Sharp JX scanner and a 24-bit full colour laser printer.

VIDEO

See what 24-bit graphics look like in action, on the screen.
See videos being professionally produced using the Amiga in conjunction with genlocks and other equipment.
See the Amiga in action in a FULL BROADCAST QUALITY studio

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....	The Deluxe Paint IV Video Guide @14.99
....	Advanced Techniques with Deluxe Paint IV @14.99
....	The Deluxe Paint IV set (2 videos) @22.99
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No Switchcards - Chargecards please add 50p

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BURGESS VIDEO GROUP, Amiga Video Collection, Unit 6, Industrial Estate, Brecon, Powys, Wales. LD3 8LA
All queries call Ian Burgess on 0874 611633 or send a Fax on 0874 89224. We aim to despatch all orders within 10 days, but please allow up to 28 days for delivery.

MANY MORE AMIGA TITLES AVAILABLE SOON!

THE STUDIO

It's all very well having lots of nice video equipment and an Amiga but it's all made or lost on how you put it together.



Editman installed in a medium sized studio.

We've already seen how important it is to preserve the integrity of your video signal, and reduce the number of generations of tape you have to produce. Just because you have the right source and editing equipment doesn't mean everything is going to be alright.

How your hardware is linked up and the way in which you edit your finished video together can have a great effect on the end result. You can of course edit the video together entirely manually, and if you are just doing a birthday party or family interest event then their is nothing wrong with this approach.

When it comes to more complicated efforts, like shooting a wedding or a sporting event, things become slightly more tedious, especially since the footage will be spread over several tapes.

One company based in Derby has addressed this problem by creating a device which enables the computer to take control of the editing process.

TIMECODES

Editman is very accurate. Because its internal clocks measure to the frame counts generated by the video decks, it is not necessary to use timecode information. The system gives about a three frame accuracy, which is all that can be guaranteed by most video decks anyway. Short of using digital equipment you are not going to be able to get much more accurate.

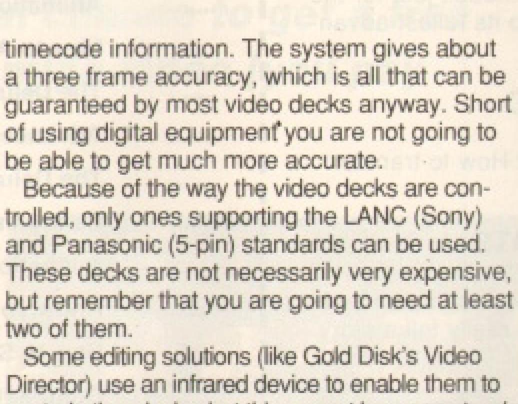
Because of the way the video decks are controlled, only ones supporting the LANC (Sony) and Panasonic (5-pin) standards can be used. These decks are not necessarily very expensive, but remember that you are going to need at least two of them.

Some editing solutions (like Gold Disk's Video Director) use an infrared device to enable them to control other decks, but this cannot be guaranteed to work to any degree of accuracy (although it's a very fair effort for people who are not too fussy).

THE SOFTWARE

The software controlling the editing process is both complex and yet very intuitive and easy to use. The edit points are set by simply activating a button at the correct part of the tape, both for the in point and the out point of the edit. The software intelligently calculates the length of the clip and displays the run-time in a separate timer.

All this information is also stored in the form of an edit decision list, which is like a script of all the edits which are to be made.



Editman also runs on the PC, and looks identical. The idea is to create platform independant software.

When edits have been defined they can all be activated by choosing the assemble option.

The software will then control the tape decks, scanning through to the various edit points. The controls will automatically perform a short run-in on the source deck to allow the unit to get up to speed. There is an optional review mode that will show every edit as it appears on the destination tape.

As well as controlling a tape deck, you can also use Editman to display Amiga graphics at appropriate points.

THE HARDWARE

Editman super is an update on the old Editman system. The super model now supports S-VHS for higher quality results. Although this is far from being broadcast quality, it is more than adequate for domestic and semi-professional use. If you don't have S-VHS equipment, composite is still catered for. A 'send' port is also included, which allows you to optionally pass the video through a genlock (or in fact any other video effects equipment). Editman will be supporting software driven genlocks in the future as well as many other pieces of video hardware. The intention is that hardware add-ons which control wiping, effects and so on will all be software controlled to eliminate totally the need for the user to be present during the actual assembly

THE CONCEPT

The whole idea of designing the series of devices from a video point of view, and also designing top-down from the model with the most features to the simplest unit, Syntronix have succeeded in catering for almost everyone from the video enthusiast who wishes to use computers to the Amiga owner who wants to do something more productive with his camcorder.

The Editman system is not necessarily a new way of looking at DTV, it's just more a methodical approach. Yet it simultaneously manages to combine emergent technology in the video field within a carefully constructed logical and easy to use framework.

THE RESULT

This is the sort of editing suite which is bound to become more prevalent in both the semi-professional and enthusiast markets. By using the computer as more than just a glorified caption generator, this unit and others like it integrate the Amiga into the heart of the video production system rather than just using it for the odd effect.

STUDIO

For more information on the Editman range of peripherals and also details of other emergent technology in the video field, contact Syntronix on 0332 298422.

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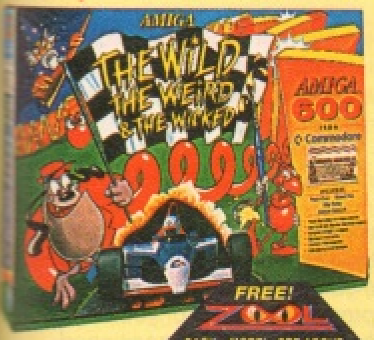
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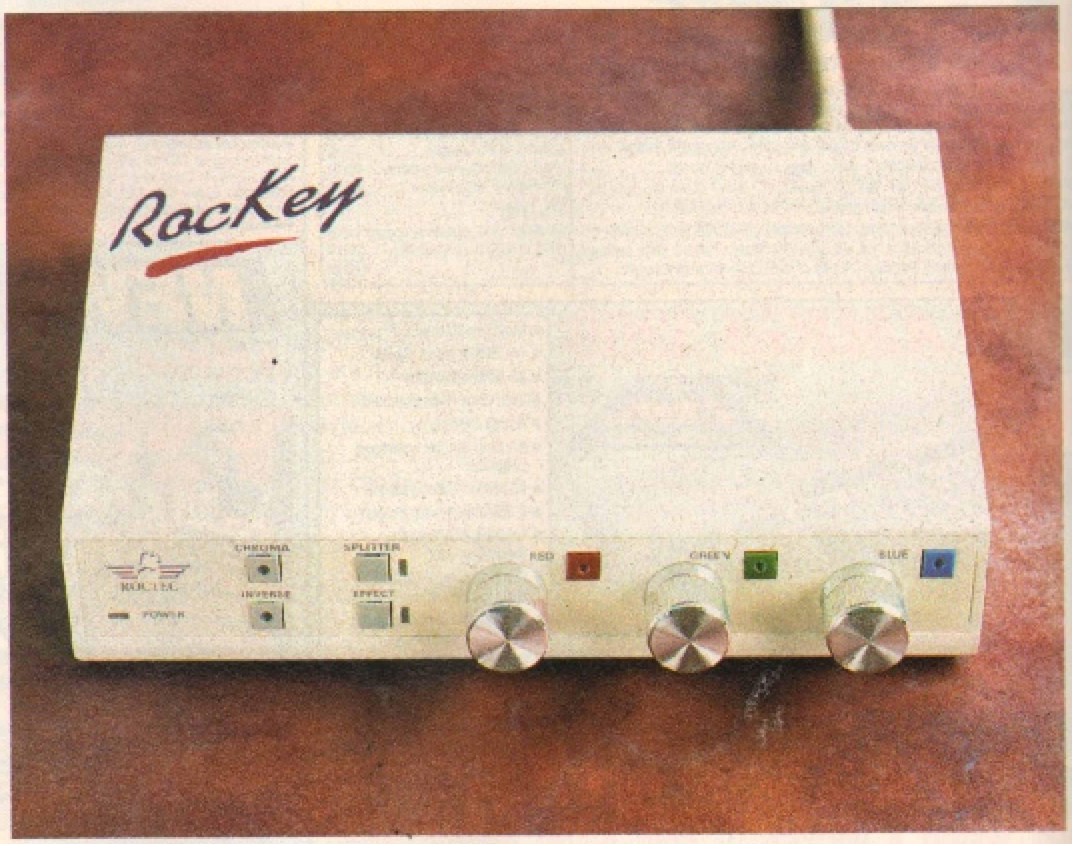
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SPECIAL EFFECTS

Not happy with your video? Need to add that certain something – such as a fifty foot high gorilla eating biplanes? Or are you looking for a cheap and cheerful way to produce a pop video? Or maybe a Doctor Who rip-off (but where would you get all that cardboard from?).



A Chromakey unit like this one is invaluable in producing a vast range of effects.

There was a stage when all films were judged by the punters by how many novel effects were used in them. A well thought out ordinary effect can be just as effective (pun? what pun?) as a jolly expensive one, so do not despair. Here are a few techniques that everyone should know how to use.

GENLOCKING EFFECTS

Genlocking can provide some good effects with very little effort, although some imagination is required to make the most of them. Drawing silly beards can become repetitive, so here are a few suggestions.

MOVE HOUSE

If your genlock has a positional wipe, use perfectly horizontal horizons and add new backgrounds by superimposing a Vista generated backdrop.

SPACE CADET

Draw a spaceship orbiting a planet using *Deluxe Paint.* Make sure that you do not use colour 0 as the sky colour. Fill a window in the spaceship with colour 0, and then line up the video camera to provide a picture of yourself very far away. When the camera is positioned so that you are beneath the window section and the scene genlocked, it will appear as though you are flying the ship.

BANG!

Disintegrate your friends with this handy household hint. First video your victim walking into a detailed room and then standing still directly in front of the camera. Stop the camera and ask them to move out of shot. Without moving the camera, re-start filming the scene



Now it doesn't matter what jumper granny knitted you for Christmas, you can just key over it.

SPECIAL EFFECTS



Add new horizons with a genlock or chromakey.

with them not present for a minute or so. Next digitise the scene with them in it, and with *Deluxe Paint* cut them out. Clear the screen to colour 0, and create an animation using only their image, causing it to explode into fragments. When the animation and disappearing act footage are genlocked together, your ex-friend will seem to explode and vanish completely.

KEYING EFFECTS

A chromakey can be used to provide all sorts of weird and wonderful effects. By adjusting the colour selectors, any colour you like can become transparent and replaced with computer graphics. When the thresholding is badly set, parts of the image seemingly at random are affected.

• By having someone wear a jumper which is pure blue, you can have them walk around a scene with the chromakey providing their jumper. This can be particularly effective if you key in a weird and psychedelic image – you could even animate it

• Sucked into Computerworld. Instead of generating a backdrop on your Amiga, why not key someone into an application program, or even Workbench!

CAMCORDER EFFECTS

There are a lot of effects you can create just using a camcorder, and we don't just mean those silly modes that come built-in to them.

• Simulated dissolve. If you do not have any units which can dissolve from one image to another, you can always create the effect on a camcorder. Swap to manual focus and quickly defocus the shot. Pause the recorder, move to the next scene, start recording defocused again before engaging the autofocus. It only woks effectively when the backgrounds are similar, but it's a useful trick.

FRAME BY FRAME ANIMATION

Animation is possible with most new camcorders. Set the camera on a tripod and select animation mode. Focus on a well-lit table and disengage auto-focus. Now move small objects around, pressing the camera operate button after each movement. After an hour or so, you will have created about 10 seconds of stop frame animation.

Some expensive video recorders will actually create single frame animation (well, accurate to about 3 frames anyway). This could be used in the same ways as above, or with an Amiga with a 24-bit framestore to produce some photo-realistic animation sequences.

• Buster Keaton's car. There is always the old favourite (using one of the above animation techniques) of animating someone apparently driving along the road at 40mph without a car. You need a calm day for this and someone very stupid ('It's like this Jon…') to pretend to sit in a car in the middle of the road.

• Feedback horror. By a combination of pointing your camcorder at a monitor that's relaying its image and fiddling around with the controls you can get some quite breathtaking effects. Adjusting the zoom will enable you to find interference points where suddenly everything appears to be in perfect focus with lots of weird lines coming 'towards' the viewer. When used in conjunction with genlocks and keying units they can provide surreal backdrops or foregrounds for your space adventures. Gene Roddenberry would have been proud.



By playing with the threshold on the Rockey you can create bizarre Top of the Pops-type images.

You have to set levels correctly to avoid the tell-tale keying fringe.



• Deliberate degeneration. By recording to about six or seven generations on your equipment you can create some very strange effects indeed. Unfortunately it is a little hard to predict exactly what will happen, but it usually goes along the lines of everything becoming fuzzy, the colour balance taking a dive toward red or blue, static like effects and the occasional glitch. Very handy for simulating TV reception in Wales.

DIGITIZER EFFECTS

Digitizers can be very useful in DTV, not least because you can digitise any frame of your video, muck around with it and then send it back to tape. Essentially they can be used as an off-line DVE unit. In combination with a genlock you can create those shrinking wipes between two moving images that you've always wanted to.

• Rotoscoping. From the dawn of something or other animators have been cheating. By digitising, or in the old days just making prints from, successive frames of a real world image and using these as the basis for an animated drawing, it is a lot easier to create a realistic animation. Ask Paramount Pictures and the guys behind Cool World.



With a combination key and wipe you can simulate many DVEs such as the classic universe disappear ing into the space between the ears.

GLOSSARY

There's probably more confusing jargon in the world of video than there is in any field of computing. Don't get caught out, get caught up with the amazing CU glossary.

8mm
More and more camcorders are boasting '8mm' on their little stickers these days. What is it? 8mm is simply a new standard of video, similar to but incompatible with VHS, which provides higher quality pictures with lighter, simpler and therefore cheaper hardware. You can buy 8mm video recorders as well as camcorders, but this isn't necessary to watch your 8mm videos, as the composite video information can be relayed by cable to the SCART socket of any video recorder, no matter what system it uses.

Amiga
The best DTV computer there is, bar none. The excellent quality of its graphics, and the large amount of hardware and software available lifts it head and shoulders above any opposition.

Chromakey
It is possible to combine two video signals in such a way that one, and only one, colour of the first signal is replaced by the second. This is known as 'chromakeying'.

Chrominance
The colour information part of a signal. Usually the RGB information is encoded and combined using a terribly mathematical technique known as quadrature mixing.

Composite
If you're an American, you'll say 'com-pos-it', otherwise it's 'comp-o-sit'. Either way, a composite video signal combines both the Chrominance and luminance information into one video signal. It's handy, but also prone to colour crosstalk.

Crosstalk
If you encode colour and brightness video information and pipe them down the same cable the signals will interfere with each other. Typically this can look like a shimmering effect over large areas of colour, or weird black and white lines over a stripy shirt. This effect is removed with Y/C systems, such as S-VHS or Hi8.

Deck
Slang for video recorder/player.

Dub
The recording of a video/audio track from one deck to another.

Edit
Combining several shots together is known as editing. You can perform simple editing by using the pause key on your video recorder. If you invest your money in expensive editing suites, you'll get to play with all sorts of fun faders and jog shuttle devices.

Flying erase head
Fitted to more up-market video recorders, this special video head can write to the video tape frame by frame and avoid any nasty glitches between edits.

Generation
the number of times removed from the original the present copy is. As quality is lost over successive generations, it is important to keep the total number as low as possible.

Genlock
A hardware device which can overlay computer graphics onto video images, just like the ITV Chart Show.

Head
The part of a video recorder that reads and writes the video information to tape.

Hi8
The near pro-level version of 8mm, which like S-VHS stores Luminance and Chrominance signals separately.

HiFi
Newer video-recorders come with HiFi sound, and if you connect the video to your music centre you discover why. With HiFi sound, near CD quality sound is stored on the video tape in full stereo and sometimes full surround-sound. Perfect for music videos.

HQ
High Quality. When the video recorder manufacturers wanted us all to rush out and buy new decks, they improved things slightly and added little 'HQ' stickers to the front of the recorders. Virtually unavoidable these days.

Jog shuttle
A knob on expensive decks which can be spun to find video frames accurately and quickly. The latest gimmick to come to home systems.

Keying
When you mix two video signals, you are keying them together. This is actually quite a tricky business, as the signals need to be synchronised perfectly with special hardware.

Luminance
The lightness and darkness components of a video signal. If you connected a luminance signal to a colour monitor, you would see a black and white picture.

Modulator
A device which can convert composite or Y/C video information into RF signals, typically for display on a colour television.

Monitor
Like a TV, but with all the RF and tuning components removed. The picture quality of a monitor is generally much better than on a TV, but a monitor costs considerably more.

NTSC
Never Twice the Same Colour. OK then, National Television Standards Committee – the Yanks' idea of a video system. It isn't as good as PAL, and it's completely incompatible as it runs at a different frame rate (60Hz).

PAL
Phase Alternate Line – the Brits' version of a video standard. Slightly higher quality than NTSC, and a slower frame rate (50Hz).

RGB
Red-Green-Blue. An RGB signal contains the video information split into its colour components. Typically used by computer monitors for a crisp display.

RF
Radio frequency. When a video recorder wants to display a picture on your TV, it pretends to be a very low power television station, and actually broadcasts the signal (with sound included) into the aerial socket of the TV. If you can replace this set-up by directly linking the TV and video with SCART leads you will get a much, much better picture.

SCART
Also known as 'Peritel', the SCART socket is a standard connector that bundles all the audio and video signals known to man into one nasty big brute of a connector that's impossible to solder.

SVHS
The 'S' stands for Super or possibly Separate. An SVHS deck uses the same style of cassettes as a standard VHS machine, but has the option of recording the Chrominance and Luminance information separately. Tapes recorded in this are of a much higher quality (no colour cross-talk), but cannot be played back on VHS-only machines.

SVHS-C
The 'c' means compact - the video cassettes have been shrunk to near music cassette size to fit into a camcorder. Special adapters are available which allow the small tapes to be played back in standard recorders.

VHS
Video Home Standard, after winning the VHS/Betamax wars it became the most common video format in the world. Pretty crap really.

VHS-C
Like VHS, but 'compact' with small cassettes for camcorders. VHS-C tapes are usually quite short in comparison to 8mm tapes. By means of an adapter, the cassettes can be played back on full-size machines.

Y/C
Another way of describing a split Chrominance/Luminance video signal.

Zardoz
An excellent film with Sean Connery and Charlotte Rampling. It is probably out on video.

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